AIR CONDITIONING HEATING & REFRIGERATION NEWS

The Newspaper of the Industry

RESIDENTIAL — COMMERCIAL — INDUSTRIAL

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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Story of the Week
Dinner of the Future
Traveling Talesman
Out of Our Mailbag
Relax and Enjoy
Add Newspaper Boners
The Anatomy of Luck

Story of the Week

Here is the favorite story of the president of one of our industry's biggest corporations:

Brothers from start-to-last, two old bachelors finally decided to get married. 'Twas a double wedding ceremony, and they honeymooned together in a resort hotel.

Next morning, while their brand-new wives were primping, the two brothers met at the entrance of the hotel's coffee shop.

"I must have lost my poop," complained Brother No. 1. "Couldn't do a thing last night."

"Omigosh," Brother No. 2 agonized "I didn't even think of it."

Dinner of the Future

According to some of our imaginative engineering friends who work for Carrier:

Our grandchildren will begin dinner with an ethyl alcohol cocktail, and summon the *maitre d'alchemy* to seek suggestions for the *entree.*

"We have wonderful tetrahydro-naphthylamine *en gelee,"* he could reply. "It was just compounded this morning. And may I suggest our pressed ethenoids?"

"How are they prepared?" Miss Companion will worry.

"They're readily esterfied by methy iodide and sulfuric acid to a dimethyl ether."

"What about the anthracenes?"

"I'm sorry," the waiter could respond. "They're unsymmetrical tonight."

Wines then will be selected from a du Pont catalog. As a climax to this little drama, our grandson probably has forgotten his wallet and checkbook.

And so these epicures of a future era will wash test tubes the remainder of the night to pay for their synthetic feast.

Traveling Talesman

From a Columbus, Ohio, hotel bathroom poster we lift these RULES FOR SMOKING IN BED:

Rule 1—Inform the management where you wish your remains sent, as it is a matter of

(Concluded on Page 8, Col. 1)

Philadelphia Firm May Acquire Frick

WAYNESBORO, Pa. — At a special meeting to be held here Sept. 21, stockholders of Frick Co. will vote on a proposal of General Waterworks Corp., Philadelphia, to acquire the assets, properties, and business of Frick.

D. Norris Benedict, president and general manager of Frick, announced last week that the company's board of directors has approved the proposal. Directors of General Waterworks approved the proposal earlier. Approval of General Waterworks' stockholders is not required.

Howard Butcher, III, president of General Waterworks, has stated that Frick will remain in Waynesboro and the new owners will make a determined effort to expand and strengthen its operations.

"Greater emphasis will be placed on research and product development and careful study will be given to the desirability of acquiring other small companies to add to and complement Frick's lines," the announcement said. "Adequate funds will be available for this purpose."

Butcher stated further that Benedict, having served Frick for 58 years in many capacities including general manager for the past 32 years, has asked to be relieved of his duties. William H. Aubrey, vice president and assistant general manager, will be president and general manager. No other changes in personnel are contemplated, according to the announcement.

Benedict said the terms of the proposition involve the exchange of two classes of stock of General Waterworks for the assets, properties, and business of Frick.

The shares received will be distributed to Frick's stockholders after which a new corporation bearing the same or a

(Concluded on Page 4, Col. 4)

Excise Tax Sure, Only Question Is Effective Date

WASHINGTON, D. C. — All indications point to the proposed new Treasury Department regulation governing the application of the Federal excise tax of 10% on all room air conditioners, and the 5% tax on household refrigerators and freezers, to become effective in the form in which they were published in the Aug. 25 *Federal Register* (essential parts of which were published in the Aug. 31 issue of the NEWS).

(Concluded on Back Page, Col. 1)

Fedders Bows 38 Room Coolers For '60; Longest Line Ever

MASPETH, N. Y. — A 1-hp. "Minute Mount" casement window model and a new type of "Four Seasons" heating unit are part of the 1960 line of window air conditioners introduced by the Fedders Corp. here.

The 38-model line comprises the largest selection of window units ever offered by Fedders.

In addition to providing a broad price structure, the wide range of B.t.u. cooling capacities "will enable Fedders dealers to de-emphasize B.t.u. in retail selling and concentrate on more positive and distinctive Fedders features," the announcement indicates.

"The company will not countenance any muckraking, destructive battles on B.t.u. capacities, and will not permit its advertising funds to be utilized for any advertising which utilizes 24-hour, instant or other unauthorized B.t.u. claims," officials stated.

"As last year, Fedders will include the B.t.u. capacity on the nameplate of each unit in accordance with NEMA standards. Not only will Fedders promote NEMA standards but capacity ratings based on such standards will be the only capacities authorized for advertising."

Production was to start on a

(Concluded on Page 21, Col. 3)

Pre-Service Education Of Consumers Strongly Advised

(Conscience of the Industry Editorial by George F. Taubeneck)

REMEMBER the "good old days" when, if you didn't feel well, the doctor came to *your* home to examine you? Now you go to *his* office, even if you're a stretcher case. From the doctor's standpoint—probably even from yours—this makes good sense. All his time is spent at his specialty: repairing people.

In the olden, golden (?) days too much of his time was spent hitching Old Dobbin to the shay and clippity-clopping around the countryside to visit the ailing.

Unfortunately, those who repair air conditioners, furnaces, and refrigerators still have to do it the old-fashioned

(Concluded on page 12)

Program Announced for Sept. 27 RACCA Convention in Los Angeles

WASHINGTON, D. C. — Contractors attending the 14th annual convention of the Refrigeration & Air Conditioning Contractors Association, set for Sept. 27-30 at the Ambassador Hotel in Los Angeles, will be "Prospecting for Profits."

That's the theme of the convention, during which speakers from the manufacturing, wholesaling, banking, engineering, and labor fields—together with specialists in training and labor relations and fellow contractors—will point up ways for the contractor to increase his profits.

The Ambassador Hotel will also be the scene of a pre-convention meeting of the California Council of RACCA. One of the speakers at this meeting on Saturday afternoon, Sept. 26, will be Edith Chambers, contractor, and the only woman appointee to the California Contractor's State License Board. She will tackle the question, "How Can We Get a Federal Sub-Bidders' Listing Law?"

The California Council's meeting will also be addressed by Richard T. Hanna, California assemblyman, who will discuss "1961 Construction Legislation and the Trade Association."

First day of the national RACCA convention — Sunday, Sept. 27—will be devoted to registration, a board of directors' meeting in the morning, the annual reception and cocktail party starting at 5 p.m., and dinner, entertainment, and dancing in the evening. The program for Sept. 28, 29, and 30 follows:

MONDAY, SEPT. 28

9 a.m.—Opening of convention. Remarks by Norris Poulson, Mayor of Los Angeles; Jack K. Carney, convention chairman; Walter McCarty, McCarty Bros., Chicago; Tom Alexander, national president.

(Concluded on Page 21, Col. 1)

BEHIND PAGE ONE . . .

COMMERCIAL Air Conditioning
332-Ton Gas Absorption Chiller Is Heart of Building's Air Conditioning 7
4 Air Conditioners on Roof Cool Bakery Sales Area; Individual Control Provides Flexibility and Economy 13
INDUSTRIAL Air Conditioning News 10
RESIDENTIAL Air Conditioning News 9
• **News In the Heating Field** 6
• **Heat Rejection (1)**
Important Factors In Maintaining Proper Condensing Temperatures 16
• **Refrigeration Problems** 18
• **Technical Center**
Handling Refrigerant Cylinders (1) 20
• **Servicing Auto Air Conditioners** 22

Pa. Bill Seeks Licensing of Oil, Gas Heat Installers

HARRISBURG, Pa. — A bill that would require the examination and licensing of all oil and gas heating unit installers except licensed plumbers is now in the hands of the committee on public health and sanitation of the General Assembly of Pennsylvania.

No hearings on the bill have yet been scheduled or held, though the measure was introduced last June.

The bill would impose a $10 fee for examination for a heating unit installer's license, a $5 fee for the license after successfully passing the examination, and a $2 annual renewal fee.

It would also set up a $10 inspection charge for each installation before the burner can be put into operation.

A heating unit is defined as a gas or oil fired central heating system for use in a private dwelling or commercial building.

The bill specifically exempts

(Concluded on Back Page, Col. 4)

We'll Keep Sweatin'

WASHINGTON, D. C. — Hot weather will continue through September for most of the nation, the U.S. Weather Bureau states in its 30-day forecast for the month.

"Above normal" temperatures are forecast for the North Atlantic States (including all the major eastern metropolitan areas) and for the entire western half of the country, with "much above normal" temperatures predicted for almost all of California and some other parts of the West.

Newly Formed Association

Mobile, Ala. Mechanical Contractors Operating Successful Bid Depository

MOBILE, Ala.—A bid depository which it believes is entirely legal and which has been upheld by the courts in at least one other state is operated by Mobile Mechanical Contractors Association, Inc., a newly-formed organization here.

Under the plan, the amount of a bid on each job is filed with the trust department of a local bank. Then, when the architect or general contractor opens the bids, the mechanical contractors have in their own possession a list of all bids and the amount bid by each. This discourages "shopping around" by the general contractor and at the same time is not collusive bidding as no bidder knows in advance what the other is bidding, it was pointed out.

Under the rules, any mechanical contractor bidding on a job must file notice of same 48 hours in advance and must have his bid in by 5 p.m. of the day before bids are opened. The system has worked out well so far and the contractors are pleased with the results, it was said.

Officers of the association are: Jim Phillips, president of Air Conditioning Engineers, president; M. H. Best of Best Plumbing Co., vice president; Ervin Heblon, Gulf Air Conditioning Co., secretary; and J. Bradley Donaghey of James B. Donaghey Plumbing & Heating Co., treasurer.

Cool Playhouse Gives Lady Next Door Hot House

GREENWICH, Conn.—An air conditioning system was installed recently in the Greenwich Playhouse as part of a general renovation project.

This was fine for patrons of the motion picture theater. But not for Mrs. Mary A. Casey, who lives next door to the Playhouse.

Mrs. Casey complained to the city health department that heat expelled from the theater's cooling system was being blown right into her kitchen and bathroom.

Citing the theater for violating the "nuisance" provisions of the town's sanitary code, the health department ordered the Playhouse to find some means to direct the flow of hot air elsewhere.

U. S. Court of Appeals Upholds Lower Court Decision In Holly-Coleman Suit

SAN FRANCISCO—The U.S. Courtof Appeals here has upheld damages totaling more than $2 million which were assessed Coleman Co. by a lower court last year in a patent infringement action brought by Holly Mfg. Co.

The patent suit, which has been in the courts for six years, was over the design and sale of a particular model of gas wall heater.

In Wichita, Kan., Sheldon Coleman, president and board chairman of Coleman Co., said the judgment against his company will have no effect on its regular business operations or expansion plans.

"Whether we will pay the judgment now or seek review by the U.S. Supreme Court will be determined after attorneys have studied the decision of the U.S. Court of Appeals," he said.

"Payment of the entire amount is well within the financial capabilities of the company and we will therefore continue both our immediate and long-range plans for expansion."

Tenney, Victoreen Defer Merger Talks

NEW YORK CITY—Negotiations on a proposed merger of Tenney Engineering, Inc., and Victoreen Instrument Co. have been deferred by directors, primarily because of divergent ideas about acquisitions, it was reported here recently.

Saul S. Schiffman, Tenney chairman, was quoted as saying: "If we can come back together at all, it will be just before the end of the year."

Schiffman said the two firms "are moving in different directions." He explained: "Our recent acquisitions — and a couple of things that look pretty imminent—complement and supplement our line. Victoreen's policy seems to be to take on anything that looks good, even if it doesn't fall into their current line or ours."

Toledo Transit Board Studies Cool Buses

TOLEDO—Toledo's heat wave, with an assist from the Cincinnati interurban bus line, caused the question of air conditioned buses to come before the Board of Transit Control.

The board decided to ask the Community Traction Co. to study the feasibility of installing air conditioning units in CTC buses, suggesting that trial be made in two express buses, according to E. L. Graumlich, transit commissioner.

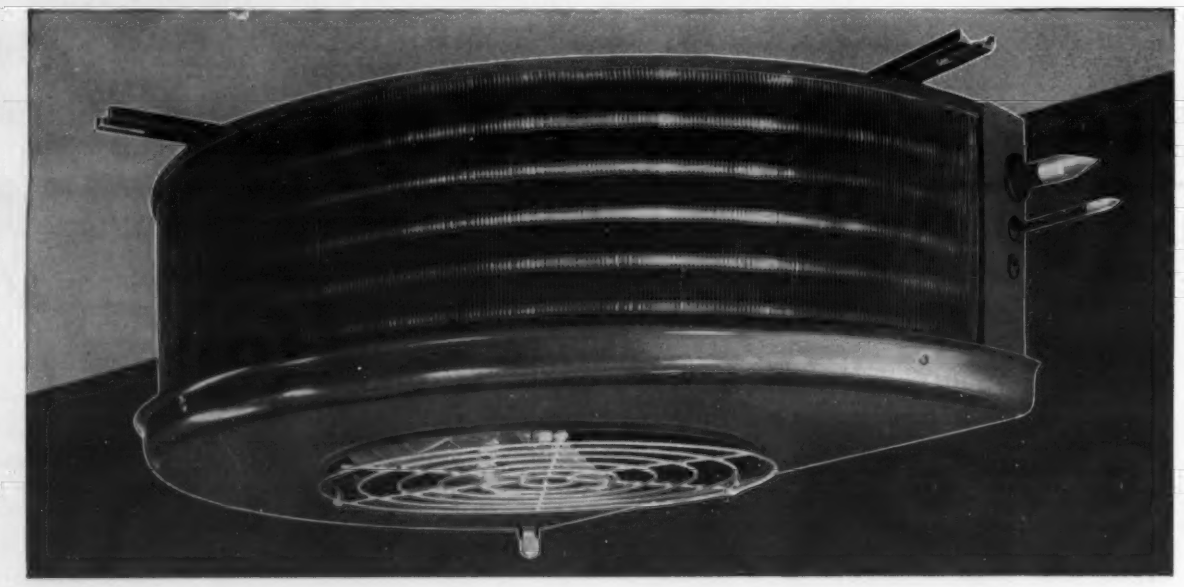
Cincinnati recently purchased 25 air conditioned buses for use in that city, Graumlich said.

Arkla Shipments Soar

LITTLE ROCK, Ark.—Arkla Air Conditioning Corp. reported a shipment of 5,771 gas air conditioning units during the first six months of 1959, up 68% compared with 3,436 units shipped in a like '58 period.

The Space-Saving LARKIN Half-Turret Humi-Temp

Balances Temperature and Humidity



Larkin Half-Turret Humi-Temps are quality engineered to control temperature and humidity in applications above 35°F. Units mount flush to cooler wall and ceiling permitting maximum storage space.

Scientifically designed air diffuser assures uniform distribution of air, 100% usage of coil surface, more effective leaving air. Lip on drip pan forces air up and out and prevents cold air from re-entering the evaporator.

It will pay you to investigate the advantages of the Larkin Half-Turret Humi-Temp—another quality refrigeration product with traditionally fine engineering and workmanship.

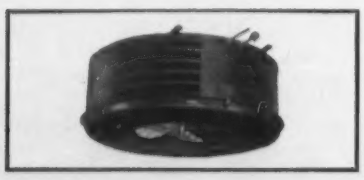
See your wholesaler or write for Bulletin 1049B.

Features That Sell

- Built-in heat exchanger
- Original, patented Larkin Cross-Fin Coil with staggered electro-tinned copper tubing and aluminum fins
- Light-weight, rust-proof aluminum case finished in Larkin Blue or gleaming white
- Permanently lubricated motors, resilient mounted, with thermal overload protection
- Hinged drain pan for easy access to coil
- Airplane-type, vibration-proof fastenings
- Heavy die-stamped mounting brackets, slotted for easy mounting
- Fully insulated drip pan

BASIC RATINGS

Model	Capacity Rating Btu/hr @ 10° TD F	Total Surf. Area	Cfm
HT-25	2500	74	500
HT-35	3500	85	700
HT-45	4500	107	900
HT-54	5400	154	880
HT-68	6800	189	1120
HT-87	8700	228	1400
HT-106	10600	296	1850



LARKIN TURRET HUMI-TEMP ALSO AVAILABLE

WATCHDOG OF THE NATION'S FOOD AND COMFORT — LARKIN

LARKIN COILS INC.
519 MEMORIAL DRIVE, S.E., ATLANTA, GEORGIA

HIGH VACUUM
PUMPS • GAUGES
EQUIPMENT
ACCESSORIES

• Indicators • Manometers
• Couplers • Leak & Moisture Detectors • Hoses • Valves

Expert technical assistance is available from Airserco to help you solve the "*tough*" ones.

SEE YOUR WHOLESALER OR WRITE US.

AIRSERCO MFG. COMPANY
435 Melwood Ave. • Pgh. 13, Pa.

Here's a familiar sight!

These shoes belong to one of the many Lau Sales Engineers located throughout the United States and Canada. Manufacturers who use quality air handling components in their product have come to recognize these Lau Engineers as a symbol of knowledge and dependability... a reputation earned through 28 years of service to the industry. For constructive help on any air handling problem call or write Lau today. Your nearby Lau Sales Engineer will contact you immediately.

The Lau Blower Company • Dayton, Ohio

Effective Sept. 10

Detroit Legalizes Window Conditioners That Encroach on Required Yards

By George M. Hanning

DETROIT — The Detroit city council moved recently to legalize window air conditioners installed so as to encroach on required yards.

It amended the city zoning ordinance to permit window air conditioners not exceeding 6 sq. ft. in area to project not more than one foot into a required yard. The amendment takes effect Sept. 10.

The amendment was offered by the City Plan Commission on recommendation of the Department of Buildings and Safety Engineering. In a letter to the Common Council, Armin A. Roemer, assistant director of the City Plan Commission, explained:

"Some difficulty has arisen regarding the encroachment into required yards by the installation of window air conditioners. Under the current regulations, a permit from the Dept. of Buildings and Safety Engineering is required before installation of all window air conditioners over 1 hp. in size.

"We are informed that in checking the requirements prior to the issuance of the permit, that the applicant, in many cases, was found to be encroaching into a required yard and the permit had to be denied.

"The applicant was then referred to the Board of Zoning Appeals for the necessary waiver of the requirement for the minor encroachment.

"This has caused inconvenience and expense to the applicant for what, in most cases, was a minor infraction of the requirements.

"We are informed that this problem comes up in many cases and is likely to increase with the further public acceptance of the use of window air conditioners."

Roemer added that the City Plan Commission had discussed the matter and found no objection to the change.

Declares Dividend

SCHILLER PARK, Ill. — Directors of Controls Co. of America recently declared a dividend of 20 cents a share on the company's common stock.

General Waterworks May Acquire Frick

(Concluded from Page 1, Col. 2)

similar name will then carry on the business conducted by Frick for over 106 years, it was explained.

The preferred stockholders of Frick will receive a preferred $6 dividend, voting stock of General Waterworks with a par value of $100 per share on a basis of one share of the General stock for each two shares of the existing Frick preferred $3 dividend $50 par, according to the announcement. The General stock will carry cumulative dividends payable quarterly, will be callable at $100 per share but it will not be callable for five years.

The common stockholders of Frick will receive a second preferred $2 dividend, voting stock of General with a par value of $1 per share exchanged on a share for share basis. The General stock will carry cumulative dividends payable quarterly, will be callable after 10 years at $40 per share. For 11 years each share of this General preferred stock may be converted into one and one-half shares of General's common stock.

The principal business of General Waterworks is the ownership and operation of water utility properties in 17 states and telephone properties in four states.

The activities of the company are not limited to utility operations only. It has acquired a one-third interest in a concern manufacturing and fabricating water treatment equipment, and, through a wholly-owned subsidiary, has purchased the assets and business of a company engaged in the manufacture and distribution of water heaters, clothes dryers and water softeners. Other non-utility property owned by the company includes a building in Philadelphia.

In addition to ready access to capital markets, General Waterworks' assets will total about $115 million when the acquisition of Frick is consummated, it was stated. Its gross revenues should be about $35 million and consolidated net income should approximate $3 million, Butcher estimated.

In the history of Frick Co., going back 106 years, there have been only four men at the helm, it was noted. George Frick was first, beginning in 1853, and he remained in charge for 34 years until 1887.

Next came Edgar Penney who was president for eight years until 1895. Third was Ezra Frick, son of the founder, who completed his tenure of 32 years in 1927. Benedict, present incumbent, is the fourth in the line.

A complete statement of the General Waterworks proposal will be mailed to the stockholders as soon as possible, Frick said.

Bundy Tubing Names A. F. Bernthal

DETROIT — Appointment of Arthur F. Bernthal as managing director of Bundy Tubing Co.'s Research and Development Laboratories was announced by Wendell Anderson, Jr., vice president and general manager of the firm.

A. F. Bernthal

Bernthal succeeds Dr. R. H. Hobrock and G. S. Wiley, former director and associate director, respectively, both of whom have retired.

Bernthal, with Bundy Tubing for over 25 years, most recently held the position of advertising and sales development manager. His headquarters will be at Bundy's Research Laboratory, Birmingham, Mich., pending completion of the company's new facilities at its Detroit plant.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

...when refrigerants never rest

Constant temperature and humidity *around the clock every day in the year*—that's what it takes to keep electronic "brains" alert. And that's what Philadelphia's First Pennsylvania Banking and Trust Company called for when they planned to take advantage of modern automatic check-handling equipment. These sensitive devices . . . located in an office space totalling 3200 square feet . . . must be kept in a controlled atmosphere near 72°F. and 50% relative humidity even during week-ends and other non-operative periods.

For this critical job, York Corporation installed two 60-ton air conditioning and water cooling systems. Their refrigerant choice—Pennsalt Isotron 12. Now in its second year of trouble-free operation, this system . . . working in the face of loads that constantly vary from zero to full . . . has successfully maintained the exact conditions required.

York's system for the remainder of the building, two 250-ton units that handle 200,000 CFM, uses Isotron refrigerant 11, and gives equally superior performance.

Isotron refrigerants' extra purity, extra dryness and rugged stability have now made them York's choice. Be sure you get the same dependability—specify Isotron. Isotron Dept. 272, Pennsalt Chemicals Corporation, Three Penn Center, Philadelphia 2, Pa.

Pennsalt Chemicals
ESTABLISHED 1850

ISOTRON
THE KEY TO MODERN LIVING

q|s|p*

*Westinghouse q|s|p means quality-service-performance

. . . in products, services and programs offered to the customers of Westinghouse air conditioning and heating. q|s|p is more than a slogan. It's a pledge and a reality to those who sell and to those who buy Westinghouse products.

Quality in products—in the sales, training and promotion programs that Westinghouse provides; in the caliber of people with whom you deal; in the job Westinghouse contractors perform in installing and servicing equipment.

Service of the whole Westinghouse organization in helping contractors sell more, more profitably; the extra service given by the Westinghouse contractor and dealer to their customers; customer service, order service, replacement service and all the many others offered by Westinghouse.

Performance in every phase of business that helps your association with Westinghouse be a profitable one; performance of products in use; performance of people who are vitally interested in your needs and your customers; performance of the most modern, complete air conditioning plant in the world, manned by the most experienced workers in the industry; *performance of a full range of packaged and field-assembled equipment for all three markets—residential, commercial and industrial.*

In the months to come, you will see the graphic evidences of how Westinghouse q|s|p has built profits and reputations for the leading contractors in this industry. You will see how q|s|p becomes a powerful sales weapon for all who share the identity of Westinghouse Heating and Air Conditioning Specialists.

Westinghouse q|s|p has real meaning for contractors, specifiers and users. On your next air conditioning or heating requirement, better call Westinghouse. J-85025

YOU CAN BE SURE...IF IT'S Westinghouse

WATCH "WESTINGHOUSE LUCILLE BALL-DESI ARNAZ SHOWS" CBS TV FRIDAYS

AIR CONDITIONING DIVISION, WESTINGHOUSE ELECTRIC CORPORATION, STAUNTON, VIRGINIA

Supermarket Sack Project Proves Popular Promotion Medium, OHI Reports

NEW YORK CITY — The Treasury of Advertising of Oil Heat Institute has hit upon an exceptionally popular promotional medium in its supermarket sack project, according to OHI.

The OHI Treasury has entered into an agreement with Supermarket Affiliates, Inc., permitting OHI chapters and individual oil heat marketers to purchase advertising space on the surface of the large checkout sacks used by supermarket chains all over the country.

"Within two weeks following the announcement of availability to the OHI chapters, orders and inquires were pouring in at a rate indicating red hot acceptance throughout the industry," OHI said. "It is obvious that within the next few months millions of American householders will be exposed to an oil heat message everytime they buy groceries.

"Space is sold in units of 300,000 sacks at $660 per unit, including color printing. The name of the supermarket appears at the top of the sack, in a rather restrained manner. The oil heat message is big and bold and dominates the space."

Supermarket Affiliates handles printing and supplies the sacks to the major food chains in the appropriate marketing area. Supermarket Affiliates also recommends the number of units required to saturate a given marketing area.

Wholesalers Warned To Start Selling Electric Heat Now or Lose Business

BOSTON—Predicting increasingly widespread use of electric heating, Irwin B. Nelson of Embassy Steel Products, Inc., warned New England plumbing and heating wholesalers they must be ready to accept and sell electric heating or lose a substantial part of their business by default.

At a recent luncheon meeting here Nelson, who is vice president in charge of national sales for the Brooklyn, N. Y., manufacturer, declared:

"If the plumbing and heating distributor should be late in establishing himself as the proper distributor of the material, it will definitely reach a point where it will become impossible for him to break into the market. A direct approach should be taken."

The wholesalers were reminded by Nelson that they generally lost out on the sale of components when oil and gas heating systems replaced coal-fired furnaces and stokers. The same can happen with electric heat, he warned.

Increased generation of electric power and lower rates will mean rapidly broadening use of electric heat, Nelson believes.

Long-term government loans to finance atomic powered and/or conventional generating plants throughout the nation could bring the electric rates down to 1¼ cents per kwhr., he thinks.

"If this is achieved, most certainly it would not be economically beneficial to heat a home with any other type of fuel but electricity," he declared.

"There are certain direct savings in the construction of a home that would accrue to the home buyer," he further explained. "The actual plumbing involved or the ductwork involved in the heating system is completely eliminated. The necessity of building a chimney at a cost of from $200 to $500 —you can take your choice of cost—is completely eliminated.

Additional advantages of electric heat, according to Nelson, include room-by-room control, low maintenance cost, no need for fuel storage, and paying for the fuel as it's used rather than before it's consumed.

NEW CONDENSER WATER REGULATING VALVE

A-P MODEL 65A . . . the industry's newest, quietest, pressure-actuated way to control condenser-cooling water. Features single all-purpose adjustment, 65 to 300 psi. 30% more water capacity. Designed for use with any non-corrosive refrigerant.

Here's the inside story of superior design

UNIT-ACTION OPERATION — The Model 65A valve regulates the flow of water to water-cooled condensing units by means of head or receiver pressure which actuates the bellows in the valve. A double-diaphragm assembly, in turn, moves a Graphitar block across a stainless steel seat. Assembly operates smoothly as a unit — no independently moving parts. New design assures quiet operation, increased bellows life.

NEW DOUBLE DIAPHRAGM of nylon reinforced rubber provides flexibility for closing-opening action . . . toughness for positive seal.

GRAPHITAR (SINTERED GRAPHITE) SLIDING BLOCK is *only* moving part in water. Low-friction material won't wear out.

HEAVY-DUTY BRASS HOUSING protects positive action of high-quality cadmium-plated steel spring. Easy manual adjustment — 65 to 300 psi.

STAINLESS STEEL VALVE SEAT FEATURES EXCLUSIVE SELF-CLEANING ACTION . . . key reason why Model 65A promises trouble-free service despite dirt, lime or sand in water.

SIZES — ⅜", ½", ¾" FEMALE N.P.T.
Write for full facts on stand-out features built into the Model 65A. See what makes it the new standard for both O.E.M. and replacement applications.

Creative Controls for Industry

CONTROLS COMPANY OF AMERICA

2460 N. 32nd Street • Milwaukee 10, Wis.

Cooksville, Ontario • Postfach 313, Zug, Switzerland

NFPA Publishes New Standard for Installing Oil Burning Equipment

BOSTON — A new standard on fire safety requirements in the installation of oil burning equipment has been published by the National Fire Protection Association.

The 1959 edition of the standard, NFPA No. 31, incorporates 24 changes revising and clarifying the previous edition.

The standard, purely advisory as far as the NFPA is concerned, is widely used as a basis of law and regulation throughout the United States and Canada, the association said. It covers use and installation of everything from home portable oil heaters to commercial and industrial oil-burning equipment.

It was developed by the NFPA Sectional Committee on Liquid Fuel Burning Equipment under the chairmanship of E. F. Tabisz of Underwriters' Laboratories of Canada.

Copies of the standard (NFPA No. 31, 64 pages, 60 cents per copy) are available from the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

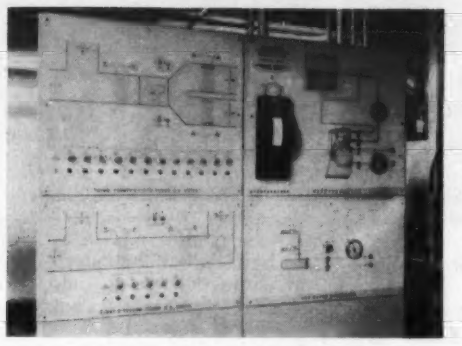
Crane & Ordway Name Returns In Northwest

SIOUX FALLS, S. D.—The old name of Crane & Ordway Co., wholesaler of plumbing and heating material, returns to the northwest in 11 branches.

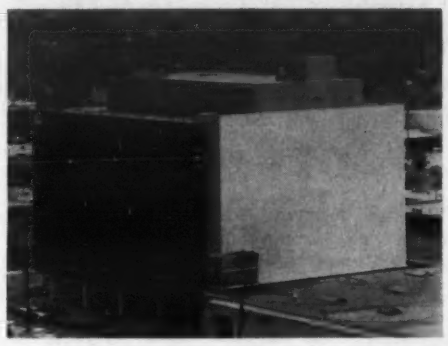
This is the same name as the company started by L. P. Ordway in 1892, with branches in St. Paul, Minneapolis, and Duluth.

In 1922 the name was changed to Crane Co. of Minnesota and remained that way until now, when arrangements were made for the Ordway family to buy out the Crane interests in this area. The old name was returned and a new corporation formed to control the Crane Co. of Minnesota.

332-Ton Gas Absorption Chiller Is Heart Of Air Conditioning System for Building



MASTER CONTROL PANEL for the Gibraltar Savings building is this Minneapolis-Honeywell "Supervisory Data Center." Air conditioning zones served by twin-duct air handling units are operated by the knobs on the upper left quadrant of the panel. The lower left quadrant operates the single-duct air handling units.



THIS TELEPHOTO SHOT of the new building shows how space has been left around the mechanical penthouse so that it can be enveloped by offices. This future expansion plan demanded a quiet, vibration-free mechanical system such as that provided by gas air conditioning.

HOUSTON, Texas—Gibraltar Savings & Loan Association's new headquarters is served by a gas air conditioning system said to be "as contemporary as the new glass-walled building itself."

Heart of the system is a 332-ton Carrier gas absorption water chiller. Designed by Bernard Johnson & Associates, consulting engineers, the system "introduces several new ideas to the Houston area," it was pointed out.

"One is a peripheral duct system on each floor to literally "wash" the inside of the 'solar gray' glass walls with cold air in summer and warm air in winter.

"A second feature is placement of the mechanical equipment in a 'penthouse' atop the five-story building, freeing the basement area for parking and the ground floor for drives, drive-in banking windows, and an attractive lobby leading by escalators to the main banking area on the second floor.

"Future plans for expansion called for a third important feature in the system.

"Provisions have been made for addition of another five stories to the building when demand arises.

At that time, the present penthouse mechanical area will remain and be completely surrounded by offices. The equipment is so arranged in the penthouse that it can accommodate the additional needs for the added five stories.

"This plan emphasized the need for a system as noise and vibration-free as possible. Coupled with the Carrier gas unit, the engineers chose two Texsteam boilers, each rated at 160 hp. and capable of delivering steam to the chiller and water heater at 15 p.s.i. Working pressure is actually 12 p.s.i. and the boilers can reach this pressure in a matter of minutes."

Wood-Leppard Air Conditioning Co. was mechanical contractor.

Buffalo Forge Co. air handling units are used throughout the building. One serves the ground floor lobby area. One serves each of the four zones — northeast, southeast, southwest and central area—of the main banking floor.

These four units and those for the third floor are located on a fourth, and fifth floors each have two air handling units, each serving two zones. This system of "zoning" by floors will be repeated when the building expands.

The cooling tower was fabricated by the Fluor Corp., while automatic controls are by the Minneapolis-Honeywell Regulator Co. Temperature in each air conditioning zone can be read and adjusted from a master control board in the penthouse. Temperature of the heated and chilled water systems can also be read from the board, which has been located next to the water chiller.

Still another feature of the mechanical system is the use of piping in the floor of the main banking level to permit radiant heating during cold months, "eliminating any possible difficulty in heating the floor immediately above the open areas of the ground floor."

Air Conditioning of Schools To Be Topic Of Sept. 24 Meeting

W. LAFAYETTE, Ind. — Air conditioning of schools is the topic of a special meeting of the Administrative Building Council on Sept. 24, it was announced by Dr. A. C. Offutt, chairman of the Administrative Building Council and Commissioner of Health for the State of Indiana.

The meeting will be held in the Rice Auditorium at the State Board of Health building, 1330 W. Michigan St., Indianapolis, at 1:30 p.m. (CDT).

Z. A. Marsh of Minneapolis-Honeywell Regulator Co. will be the featured speaker for the program. Consulting engineers, architects, superintendents of schools, and members of school boards are especially invited to attend this meeting.

Friendly Symbol of Fresh, New Service:
Look for UCON IKE !

UCON IKE stands for America's newest refrigerants—top-quality UCON Brand Refrigerants. *Plus* a brand-new approach to service . . . backed by a published marketing policy.

You'll like the people who make this policy work for you. They're friendly, competent, imaginative people, who know and care about your problems.

The service they provide is what makes the *real* difference in refrigerants!

UCON Refrigerants: 5 top-quality grades; full range of unit sizes; color-coded at the top; personalized service.

UCON Brand Refrigerants are manufactured by
UNION CARBIDE CHEMICALS COMPANY—Division of Union Carbide Corporation
30 East 42nd St., New York 17, N. Y.
Exclusive Sales Agent to Air Conditioning and Refrigeration Wholesalers
ANSUL CHEMICAL COMPANY, Marinette, Wisconsin

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UNION CARBIDE product Ucon BRAND refrigerants exclusive sales agent ANSUL

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

record that a very high percentage of fires are caused by smoking in bed.

Rule 2—Be sure to let the guests in the adjoining rooms know that you intend to endanger their lives, so that they may take the necessary precautions to protect themselves.

Rule 3—Locate the nearest door, so that if you are fortunate enough to escape from your room, you may reach safety.

Rule 4—Be fully prepared to foot the bill for damages to blankets, linens, spreads, mattresses, etc., as you can rest assured we will hold you personally responsible.

Rule 5—Now sit down in the chair, the one with the ash tray right handy, and think how foolish it is for you to take these risks . . . you may enjoy your smoking while thinking it over.

Business is good, but we do not have clients to burn, so please DO NOT MAKE AN ASH OF YOURSELF.

The Management.

Out of Our Mailbag

General Electric Co.
Tyler, Texas

Editorial Director:

The usual rumor mill is working again. This time grinding out stories that we are retiring from the warm air business. This situation is complicated by the fact that our heating factory at Trenton is on strike.

Those of our competitors who either from misinformation or downright maliciousness spread stories about General Electric retiring from the warm air business (and from the cooling business) are not doing the industry any good.

I wonder if George Taubeneck ("Conscience of the Industry") is aware of the harm being done by the spreading of false rumors by our competitors. This certainly doesn't help anybody and, in fact, can cause real damage to dealers handling our products.

It tends to make the public wonder about the stability of the air conditioning industry itself.

I think a few words of wisdom in George's inimitable style in his "Inside Dope" column might reassure people within and without the industry that General Electric believes in the future of the cooling and warm air heating industry and intends to do its utmost to make a significant contribution to the development of that industry.

JOSEPH J. HEFFERNAN, Mgr.
Advertising & Sales Planning

Editor's Note: "Dope" couldn't have stated the case better, or as well.

Obviously G-E is in this business to stay. Q.E.D.

Relax and Enjoy

If you tell the truth even the people who don't like it must respect you.—SIME SELVIRMAN, late editor of "Variety."

Getters generally don't get happiness; givers get it. You simply give to others a bit of yourself—a thoughtful act, a helpful idea, a word of appreciation, a lift over a rough spot, a sense of understanding, a timely suggestion. You take something out of your mind, garnished in kindness out of your heart, and put it into the other fellow's mind and heart.—*Forbes.*

A missionary who had spent his lifetime in India said that he could tell who of the natives were Christians by looking at their faces. He said: "The Christians smile."—*Baptists Observer.*

If a man holds his nose to the grindstone 40 years his children can turn up theirs.—*Texas Outlook.*

Young people are children callously pulling off the wings of butterflies. The chief purpose of education is to impart an understanding of the butterfly's point of view.—DR TODHUNTER HALL.

We have reached an age of such prosperity in this country that living within your means is considered almost unpatriotic. —FRANKLIN P. JONES.

The need of a good job for every man isn't nearly so important nowadays as a need for a good man in each job.—DON BLACKBURN.

Add Newspaper Boners

Internal Revenue Officials said they may be able to extend a little help to confuse taxpayers struggling with their income tax forms after all. — *Tallahassee Capital Post.*

Metropolitan Opera officials ordered alterations on a performance gown they found too darling around the bosom.—*Chicago Sun-Times.*

Meyner Urges Speed on Roads. —*Atlantic City Press.*

He was found unconscious by a neighbor who smelled gas and two maintenance men. — *St. Petersburg Times.*

The Anatomy of Luck

Reports Arthur Daley of the *New York Times:*

The boys were talking between races of the turf character who kept scrambling to earn an honest dollar when some chap phoned him with an offer.

"Want to buy an oil rig for $2,700?" he said.

"I don't have the ready," was the reply. "Anyway, what is an oil rig?"

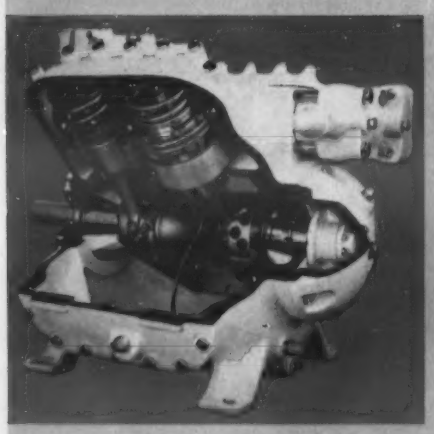
"An oil rig is for digging oil wells and your credit is good with me," said the man. "Okay," said the turf character. "I'll buy the oil rig."

It was like buying a pig in a poke except that this turned out to be a handsome prizewinning pig. The turf character went to Texas and Oklahoma. He kept hitting gusher after gusher with his oil rig, taking a percentage of each well as his fee.

Made $436,000, he did. If there is a moral to this story, it escapes us at the moment.

The function of play is to balance life in relation to work, to afford a refreshing contrast to responsibility and routine, to keep alive that spirit of adventure and that sense of proportion which prevents taking oneself and one's job too seriously. —*Advertiser's Digest.*

THE COMPRESSOR FOR QUIET AIR CONDITIONING



Cut-away of B&G Compressor shows highlights of construction. All B&G Package Liquid Coolers and Condensing Units are equipped with this new-design compressor.

In the B&G Compressor, creative designing, plus precision manufacture, has established an entirely new standard of performance... smoother, quieter, with minimum vibration. This new conception of compressor design creates a unit basically superior because it is basically simpler.

The photograph above illustrates one of the precision manufacturing operations. A machine specially designed and built for the purpose bores and faces compressor crankcases with extreme accuracy. In fact, all the tolerances from one end of the compressor to the other add up to an incredibly small figure. All major parts are made in the B&G plant...resulting in a compressor unmatched for efficiency and smooth operation.

A B&G Compressor seldom needs servicing but when it does, usually all the parts needed can be carried in two hands. All units have *one* bore diameter...the piston and rod assembly and valve and cylinder assembly will handle 95% of all repairs.

Send for complete specification and application data on B&G Air Conditioning and Refrigeration Equipment.

BELL & GOSSETT
COMPANY
Dept. FW-47, Morton Grove, Illinois

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A FULL LINE OF REFRIGERATION AND AIR CONDITIONING "PACKAGES" AND COMPONENTS

B&G Package Liquid Cooler

B&G Evaporator

B&G Centrifugal Pump

B&G Condenser

INDICATING THE INDOOR SECTION of the Weathertron heat pump used to cool and heat one of three model "Progress Gold Medallion" all-electric homes in Dallas' new Sandlewood Addition is Ben Ramsdell, manager of marketing, Air Conditioning Dept. General Electric Co. At left is Jack Lowe, president of Texas Distributors, Inc., Dallas G-E distributor. At right is Bill Chambers, builder of the three homes. Weathertron installation was made by Weatherby Air Conditioning Co.

550-Unit Apartment To Be Centrally Air Conditioned

MIAMI, Fla. — A sprawling 14-story, $7,000,000 apartment building now under construction on the Biscayne Bay side of Miami Beach has been designed with an unusual number of features, including air conditioning.

Each of the 550 units in the Southgate Towers Apartments will have all-electric kitchens. Central air conditioning and heating can be controlled from each apartment and in the case of the larger units there will be individual room controls.

All floors will have automatically operated garbage incinerators and laundry rooms with commercial washers and driers. The building's six high speed elevators are also automatic.

Silver Shield Training Programs Now Under Way For Heating Dealers In Sharon, Pa., Grand Rapids

CLEVELAND — Two more local Silver Shield training programs have been inaugurated—in Sharon, Pa. and Grand Rapids, Mich. — as organizational action adds to the growing list of cities where Silver Shield activity is under way, the National Warm Air Heating & Air Conditioning Association announced.

The Sharon training program started on July 30 with an enrollment of 19 dealer-contractors from Sharon and the surrounding Mercer County area. It is scheduled to continue for a period of 12 weeks.

In charge of the Sharon program are Bernard Lawrence, Greenville dealer - contractor, and A. R. Hoffman, dealer-contractor in Sharon. Both men are active members of the Silver Shield Steering Committee which is consolidating plans for the organization of a Mercer County Indoor Comfort Bureau to operate a Silver Shield Program in that county.

Instructors in the Sharon Silver Shield Training Program are James W. Martin, and William C. Boehmer, dealer-contractors in Pittsburgh.

Present plans indicate that shortly after the completion of the Sharon Training Program a Silver Shield Program will be launched in the area.

In Grand Rapids, 50 local dealer-contractors registered for the local Silver Shield training program at a city-wide meeting held July 30. This program is being guided by dealer-contractors Earle Oole and Richard Williamson, co-chairman of the Grand Rapids Silver Shield Steering Committee.

Present planning indicates that the Grand Rapids training effort will be launched during the second or third week in September and that two sessions per week will probably be held in order to accommodate the large enrollment.

The Grand Rapids school will be conducted under the instructorship of Dean Emeritus Lorin Miller and Prof. Charles Pesterfield, Mechanical Engineering Dept., Michigan State university.

They are two of the nation's outstanding authorities on ducted heating and cooling systems, it was noted.

Rewiring for Cooling Can Mean Rent Hike

NEW YORK CITY — The State Rent Commission announced recently that landlords who rewire large apartment buildings will be granted more equitable monthly rent increases than the $2.75 per apartment rate that has been in effect for the past two years.

Robert E. Herman, Acting State Rent Administrator, said that operating experience of the commission had disclosed that while the $2.75 rate was economically sufficient for rewiring of most apartment houses, it was inadequate to meet the cost of this improvement in structures eight or more stories high or those containing more than 65 apartments.

Therefore, Herman said, the monthly rent increase allowed for these larger structures will now be: $3 for buildings containing 65 or more apartments and less than eight stories in height; $4 for buildings of eight or more stories in height.

Where tenants request the installation of an air conditioning circuit and outlet, landlords will continue to receive an additional monthly allowance of $1 for each such installation. For this additional allowance, the landlord will be obligated to install all needed wiring within an apartment from the fuse panel box to the tenant's air conditioning unit or the place where it is to be located.

Herman stressed that in no case would a tenant be compelled to pay an additional increase of $1 a month for the installation of an air conditioning circuit and outlet in the absence of his written consent to such installation.

Although rewiring implies the consent of the landlord to the installation of an air conditioning unit by the tenant, the Rent Administrator noted that in accordance with court decisions the landlord may be entitled to further rent adjustments of $2 per month if the unit extends beyond the window sill or building wall or if part of the unit is attached to the outside of the building in any way.

EXTRA PROFITS NOW!

selling new Mueller Climatrol Electric Humidifier

Built-in heating element gives positive evaporation

Can be installed quickly anytime — in plenum, supply, or return duct of any forced-air system.

Brings you additional profits on new-home and replacement furnace sales.

Gets you into the basement — helps you uncover new-furnace prospects.

Gives servicemen an item they can sell on their calls — even carry with them.

Evaporates up to 26 quarts per day — enough to maintain proper humidity level in 2,000-sq. ft. house of average construction.

1. Attractive gold, scratch-, scuff-, and corrosion-resistant casing.
2. Solenoid water valve electrically actuated by level of water in pan. No needle valve to clog—no float to cause trouble.
3. Twin reservoir pan. Replaceable aluminum liner simplifies removal of scale in hard-water areas.
4. 800-watt "nichrome" element sheated for corrosion protection. Not affected by scale in most areas of hard water.

Built-in manual control standard. Optional humidistat available for fully automatic control.

Promotion items available to help you sell

- DISPLAY AND CARRYING CASE
- COUNTER CARD AND STAND
- ROTATING FLOOR STAND
- LITERATURE AND MAILERS

Mueller Climatrol
DIVISION OF WORTHINGTON

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The way to extra profits: Have a PLAN for selling Mueller Climatrol Electric Humidifiers. Quote one on *every* heating installation. Make it worthwhile to your salesmen, servicemen — *all employees* — to bring in add-on business.

Ask your representative or write for information.

America's most complete line — *Climate Control for healthful living*

MC-33

GAS AND OIL WINTER AIR CONDITIONERS | GAS AND OIL BOILERS | ELECTRONIC AIR FILTER | SUMMER AIR CONDITIONERS | GAS AND OIL CONVERSION BURNERS | HEAT PUMPS

Vilter Vacationers Called Back To Rush Missile Job

MILWAUKEE—Vacations of several Vilter Mfg. Co. employes were interrupted recently when the company had to call them back to complete a rush order for a special air conditioning unit for a missile contractor.

The unit, to be used in environmental static testing of liquid fueled rocket engines, was scheduled to be delivered in late August or early September.

But the contractor, Aerojet-General Corp. of Azusa, Calif., suddenly wired Vilter that they needed the unit as quickly as possible. Vilter was then shutdown for its vacation period.

In three days, the unit was on its way to the Coast.

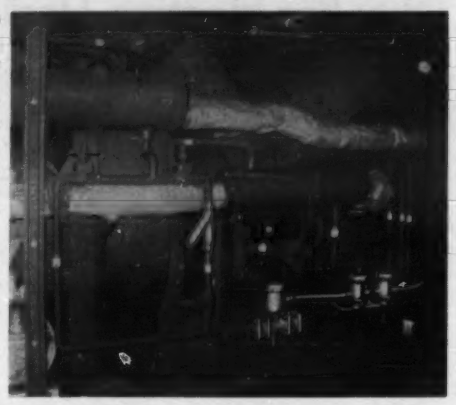
Cribben & Sexton Moves Product Engineering Div. To Air Conditioned Bldg.

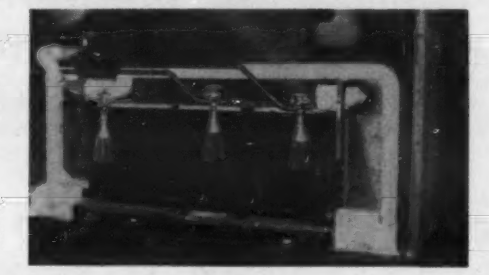
CHICAGO—The product engineering division of Cribben & Sexton Co. has been moved to its own air conditioned quarters approximately 3½ miles northeast of the main manufacturing plant.

Cribben & Sexton, a subsidiary of Waste King Corp., manufactures "Universal" gas and electric ranges and "Universal Chef" commercial cooking equipment.

The new engineering facilities consist of 23,000 sq. ft. of space at 2835 N. Western Ave. The quarters contain complete testing and development laboratory facilities, drafting and blueprint equipment, and a model shop.

'Titan' Cooling System Must Produce Exact Conditions





ILLUSTRATIONS show several Alco thermo valves, Alco explosion proof solenoid valves, Alco one-piece venturi refrigerant distributors, and Alco refrigerant strainers as used on the complex refrigeration system of the "Titan," our largest missile.

ST. LOUIS—The air conditioning system of the "Titan" must produce exact atmospheric conditions to assure the successful launching of this largest of all U. S. missiles.

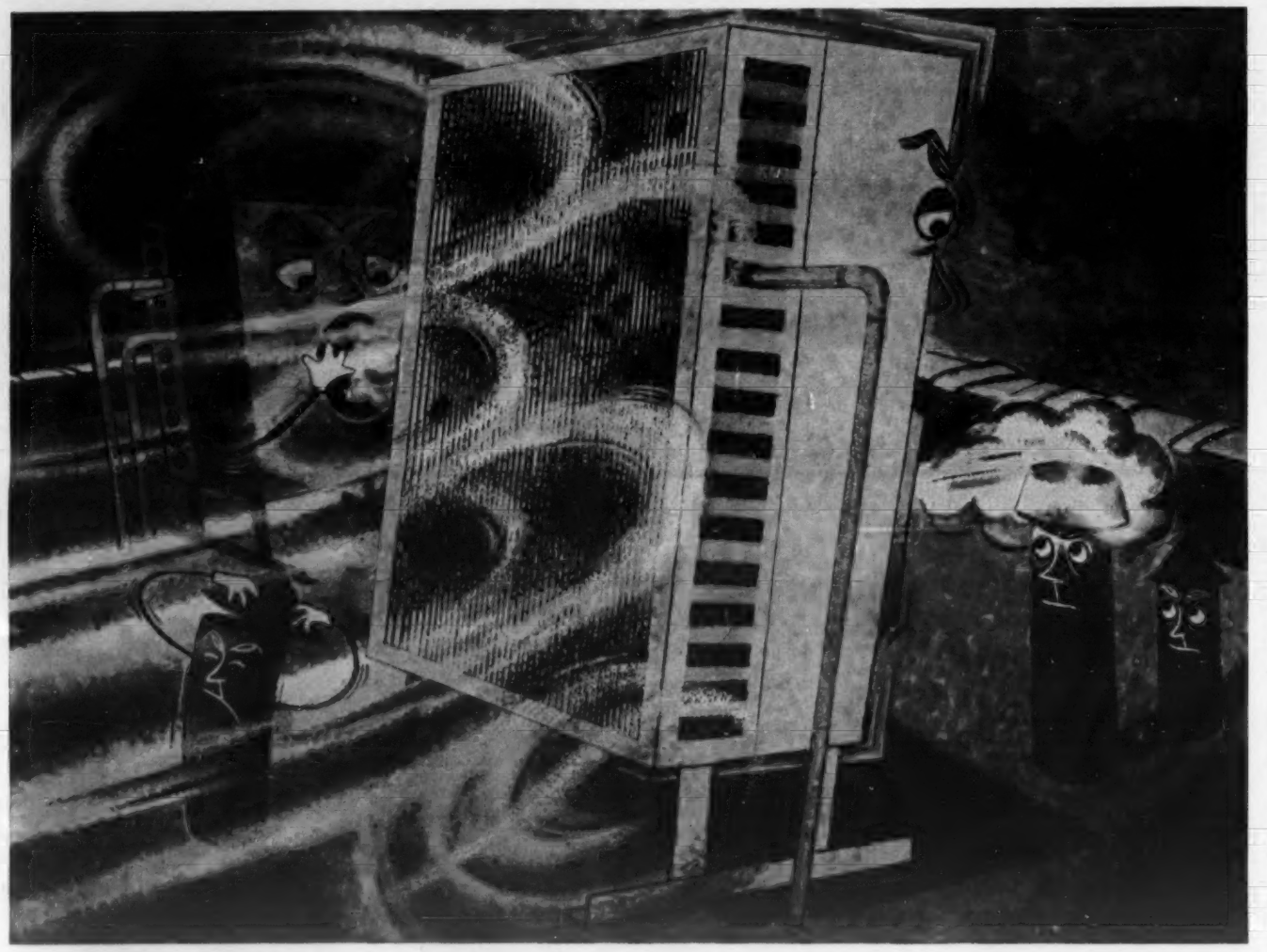
Some of the component parts of this massive heating and air conditioning unit consist of: a two-stage refrigeration system, composed of one 12-cylinder compressor with 50-hp. motor, and two 8-cylinder compressors connected to a 60-hp. motor; a 12-ton liquid cooler; a two-section air-cooled condenser mounting four 47-in., 4-blade propeller fans; a 60-hp. positive pressure blower designed to move 250 lbs. of air per minute against a 40-in. water external static pressure; an electrically fired steam generator designed to heat 175 lbs. of air per minute from -20° F. to 120° F.

This complex heating and air conditioning system, developed and built by Elliott Engineering Co., Inc., Lynwood, Calif., employed Alco Thermo expansion valves, explosion proof solenoid valves, one-piece venturi refrigerant distributors and refrigerant strainers as controls for their respective phases of this large two-stage refrigerant system.

American-Standard Industrial Div. Names Fitzgerald

DETROIT — Appointment of William J. Fitzgerald as manager of market research operations has been announced by E. W. Petersen, vice president—marketing for American-Standard Industrial Div.

Fitzgerald will develop and analyze market data for the division's line of heating, air conditioning, air handling, heat transfer, and fluid drive equipment. He was formerly market analyst with Lincoln Div. of Ford Motor Co. and market research supervisor with Chrysler Corp.



BEFORE YOU BUY, THINK!

Will your air-cooled condensers clog up fast?

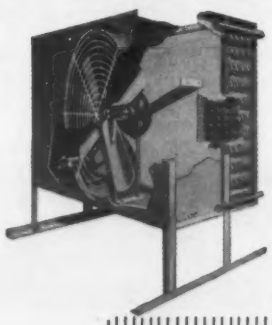
Not if they're H & M condensers with wide fin spacing

All Halstead & Mitchell air-cooled condensers and finned coils come with fins spaced wide to prevent clogging. Their exclusive Turbu-Flo fin design keeps your maintenance costs down, and improves heat transfer up to 15%.

H&M's fins are streamlined, embossed to bring about better air "wash." Since turbulence decreases resistance to heat flow through the air film, heat exchange is greater.

Finned coils come in a wide range of types and sizes: standard and non-freeze steam coils; direct expansion coils with pressure-type distributors; chilled or hot water coils. All Halstead & Mitchell coils are available from 1 to 8 rows deep, with finned heights of 12 to 36 inches, in lengths up to 10 feet.

You can order H&M air-cooled condensers in capacities of 3 to 100 tons. Be sure to specify H&M finned products from your local distributor. Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pa.



H&M AIR-COOLED CONDENSER WITH WIDE FIN SPACING

HM Halstead & Mitchell

Finned Coil Products • Air-Cooled Condensers • Water-Cooled Condensers • Cooling Towers

ROTARY SEAL

Replacement Units

Available in a wide size range for Commercial, Semi-Commercial, Air Conditioning and Home Refrigerators.

EASY TO INSTALL ★ ECONOMICAL

AT ALL LEADING JOBBERS

ROTARY SEAL DIVISION
MUSKEGON PISTON RING CO.,
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SEND FOR REPRINTS

"SERVICE MAINTENANCE CONTRACTS AND AVERAGE CHARGES FOR SERVICE PARTS AND OPERATIONS."

Only 50¢ each.

For your copy, clip this ad and mail with name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Letters Emphasize Essential Part of Financing In Supermarket Growth

Hussman Gives Retail Grocers Greatest Credit

Hussmann Refrigerator Co.
St. Louis, Missouri

Editor:

Your editorial entitled *"Courageous Decisions Created an Important Big Business,"* which appeared in the July 27 issue of AIR CONDITIONING, HEATING & REFRIGERATION NEWS, presents facts regarding the financing of food store equipment which should be augmented.

Instalment financing of food store equipment goes back 40 or more years. Some of this financing was done by manufacturers and some by finance companies. The self-liquidating character of this profit-making type of business property demonstrated that its financing was sound.

During the evolution of food stores from small specialty stores to combination stores to modern supermarkets, instalment financing has, at all times, been available to merchants who knew their business and reasonably demonstrated their food business management ability.

The growth in the size of stores obviously increased the size of credits needed for equipment. The very size of modern supermarkets produced credit needs large enough to attract more and more banks, insurance companies, etc. as well as finance companies. As your editorial states, the loss record has been very low and the financing attractive.

We have a high regard for the Commercial Credit Corp. and appreciate that they have done some of this type of financing, but they would certainly not claim to be the sole factor.

Hussmann and its predecessor companies and finance company subsidiaries have been manufacturing and financing food store equipment for 40 years. We, however, are not seeking publicity or credit for ourselves, but rather wish to see credit given where it is due.

The greatest credit we believe belongs to the operators of retail food stores. Through better management they have earned a higher credit standing in the financing world.

Secondly, credit belongs to the equipment manufacturers who have almost universally fought granting of unsound credits or terms.

Finally, credit is due to the hundreds of distributors, manufacturers, finance companies, banks, insurance companies, and others who have loaned the money to build and equip these stores—and no one of them supplies more than a small fraction of the total.

JOHN R. CAULK, JR.,
Executive Vice President

Rapid Grocery Growth Aided by CCC—McCray

McCray Refrigerator Co., Inc.
Kendallville, Ind.

Editor:

I read with interest the "Courageous Decisions" editorial on the contributions which the Commercial Credit Corp. has made to the retail grocery industry.

It must be obvious to all who are familiar with the need and use of financing of independently owned supermarkets, that the rapid expansion which took place would never have been possible without the understanding and faith of the Commercial Credit Corp.

It is well recognized that many manufacturers of commercial refrigerators had their own financing initially, and some still do, but I feel certain that these would have been inadequate as the need for supermarkets became more evident.

I think this was recognized by all manufacutrers of commercial refrigerators, and it was through their combined efforts and the proper presentation of sound facts that initially caused the executives of Commercial Credit Corp. to do more than give their request a cursory examination.

J. W. KRALL,
President

$25,000,000 Figure Conservative, Says CCC

Commercial Credit Corp.
Baltimore, Maryland

Editor:

On behalf of all the Commercial Credit family, I want to thank you for the fine tribute in your recent editorial.

We are highly flattered that the most influential spokesmen in the industry has singled out Commercial Credit for its cooperation in helping build the commercial refrigeration industry to what it is today.

Your reference to Carl Zink is particularly deserving because I can assure you of his dedication to the commercial refrigeration industry as liaison between manufacturers, distributors, and our people.

I can't imagine who could be "another firm who claims to have financed three times as many installations as Commercial Credit." In the first place, only our management people here have ever seen a breakdown of our total commercial refrigeration volume or the number of installations that we have financed.

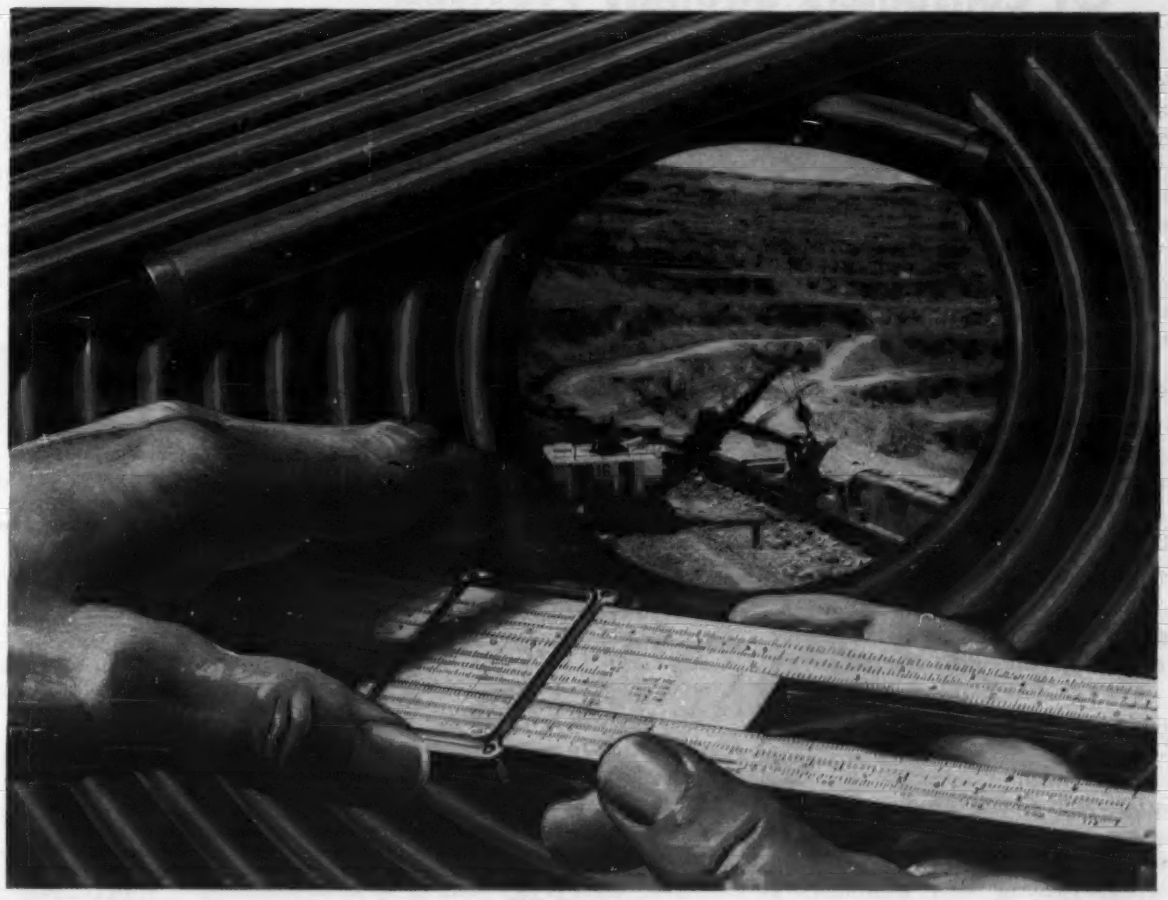
Therefore, how can any outfit claim *three times* one if they don't know what *one* is? It doesn't take a Phi Beta Kappa like Taubeneck to figure that one out!

Was the round figure of $25,000,000 that you used in your editorial too high? I will prove how conservative you really are. Where did you get the $25,000,000 figure? We didn't give it to you and you didn't dream it up.

You got it from one of our good manufacturer customers and *they* know what they are talking about because we do furnish them with monthly figures on instalment purchases of their own products. But keep in mind, George, that these figures are based on only *one* manufacturer's experience, and we are fortunate in serving virtually all of the leaders.

Your figures are conservative. All the fine things you said about my company and associates are true, and as long as we have a free press I will defend your right to say them!

THOMAS O. MCDAVID,
Vice President



HERE'S WHY SO MANY ENGINEERS SPECIFY

Phelps Dodge Copper Tube for refrigerating, air conditioning and heating units!

1 Phelps Dodge has complete control of its copper tube from original source to finished product. The copper used in Phelps Dodge tube comes from Phelps Dodge-owned open-pit mines, is smelted in Phelps Dodge refineries and fabricated in modern Phelps Dodge mills. This overall Mine-to-Market control is assurance of highest quality and finest workmanship.

2 Phelps Dodge devotes particular attention, throughout fabrication, to uniform anneal for tube flaring and careful control of die draw for close tolerance.

3 Phelps Dodge can supply maximum tube lengths and precise wall thicknesses engineered to customer specifications; straight length tube tempered to meet bending and expanding requirements.

4 Phelps Dodge multiple mill operation guarantees a steady source of tube supply to meet the needs of manufacturers of refrigerating, air conditioning and heating equipment.

It's the famous Mine-to-Market Quality Line . . . sold the quality way—through authorized wholesalers!

PHELPS DODGE COPPER PRODUCTS CORPORATION
New York, N.Y. • Los Angeles, Calif.

PD

They'll Do It Every Time

by

Jimmy Hatlo

THE CALLS YOU'D LIKE TO DUCK-- THOSE, OFFICE PAL PHOOTKISS IS SURE TO GIVE YOU---
OH, GRINDSTONE ---YOUR MOTHER-IN-LAW CALLED AT 9:02 --WANTS YOU TO PICK UP TICKETS FOR "MUSIC MAKER"-- YOU CAN CALL HER AT CHEDDAR 6-2817--SHE'LL BE THERE TILL 11:15---
OH, OH--- WELL--THANKS FOR THE GOOD NEWS---
BUT THE IMPORTANT ONES--SAY--DO YOU SUPPOSE HE FORGETS 'EM ON PURPOSE?
OH, BY THE WAY---- GUESS YOU DUCKED OUT FOR COFFEE OR SOMETHING, BUT THE MAIN OFFICE CALLED ABOUT 10:30--IT MIGHT HAVE BEEN BIGDOME--HE WANTED YOU TO CALL HIM BACK BEFORE NOON--TOO BAD I DIDN'T SEE YOU---- WHERE WERE YOU?
I WAS RIGHT HERE ALL DAY, YOU--YOU--
IT IS NOW 4:32
HAPPY HARRY OBITZ, EAST STROUDSBURG, PENNA.
7-2
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Pre-Service Education Of Consumers Strongly Advised

(Concluded from page 1)

way. It's impractical to transport an ailing cooling or heating system to a repair shop. So servicemen spend a lot of unproductive time in transit.

Again unfortunately, too many of these calls turn out to be unnecessary. The plug to an electrical outlet got pulled out accidentally, and nobody noticed, or something equally silly.

Much of this unnecessary fuuny-stuff could be prevented by "pre-service" education of the user. Posted on every unit you install should be a list of:

Things to Look for Before You Call the Serviceman.

This could be highly important—not only in terms of your relationship with the customer, but in terms of the cost-profit ratio of your own service establishment.

Remember, he profits most who services best. In that connection, here's sound advice:

(1) Service what you sell in the same manner you'd like the stuff you buy to be serviced.

(2) Don't install and run; maintain buyer satisfaction down through the years by keeping the products you sell operating satisfactorily.

(3) Take care of your customers as you wish your suppliers would take care of you. Take care of them better by supplying "pre-service" education.

(4) Be unselfish about the petty costs of good service and "pre-service." It pays in the long run.

(5) Service satisfactorily and you'll sell again to those customers you keep happy.

Numerous observers of, and commentators upon, our current economic scene attribute recent reluctance of American citizens to buy consumer durable goods to:

POOR SERVICE they've experienced on all mechanical contrivances lately. Either the serviceman comes too late, or botches the job, or charges too much.

After all, "discretionary purchasing power" IS *discretionary.* In America you can pay your money and take your choice—of goods, services, investments, recreation.

Whether to buy a new automobile for yourself or a fur coat for Mama, an air conditioner for the whole family or a vacation in California—vies with fixing up the house, sending Sister to college, buying a boat, or investing in the stock market.

In the competition for "discretionary income" (amounts left over after stomachs are filled and the rent paid) consumer durable goods have not made the progress they should. There's a good reason why:

Automobiles, televisions, refrigerators, air conditioners, power lawnmowers, etc., etc., etc. are bought confidently. Too often, however, they are repaired dismally, overexpensively, and usually too late.

Customers are becoming sick of this sort of thing. Why try to elevate your family's living standards if the new Gadget goes rrrp, conks out, and a repairman can't be located who'll do a good job *when you need him?*

Discounted prices boomerang when the chips are down—*in terms of satisfactory operation* of consumer durable goods. Hence there's a trend upon the part of purchasers to *buy from dealers and contractors who can guarantee day-or-night* SERVICE.

What good is any piece of so-called automatic equipment if it doesn't automate? (However, as pointed out earlier, often it is the user's fault. Nevertheless he will blame you, unless you've educated him.)

A few fortunate metropolitan retailers can rely upon centralized service organizations.

Most reliable local dealers and contractors, however, by necessity either have DO-IT-YOURSELF Service Programs, or should institute same if they expect to go on doing business.

SERVICE is what dealers and contractors need to sell today—rather than "fire sale" going-out-of-business pricing policies.

Consumer attitudes have changed recently. A low-price "bargain" is a bum deal if it doesn't function and satisfy the owner.

Repeat: you can help satisfy the customer with "pre-service" education.

Greater devotion hath no woman than to knit her man a pair of argyle socks. And he had better wear them, too.—ALFRED G. LARKE.

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'The Conscience of the Industry'

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—*Charles A. Dana.*

AUSTRALIAN PLEASED WITH U. S. SERVICE PRACTICES

Email Services Pty. Ltd.
Waterloo, N.S.W., Australia

Editor:

I can say definitely that my recent trip to North America gave me a great opportunity to study service organisational practices in U.S.A. and Canada. The friendship and co-operation I received was really remarkable—so much so that I wonder whether it would be the same in other than the refrigeration industry.

By this mail I am writing briefly to Mr. G. L. Johnson and his lieutenant, Chet Alexander, of Detroit. That organisation is one that stands out in my mind for efficiency. It is top example of the fact that there is money to be made on service alone, provided the contractor gives really good service and operates his business on efficient lines.

It could well be that you will be in Sydney again one of these days, and I certainly look forward to seeing you then. Conversely, the benefits of my trip may make it advisable for me to repeat the process in a few years time.

I have mentioned to John Rice and several other people your new journal, AIR ENGINEERING. There are certainly a number of people here looking forward to it with keen interest.

When you say that Australia is your favourite land abroad, I know you mean it, and we Australians are really fortunate to have such a fine protagonist.

K. THOMPSON

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4 Air Conditioners on Roof Cool Bakery Sales Area; Individual Control Provides Flexibility, Economy

ROCKVILLE CENTER, N. Y. —The 40 by 50-ft. sales room of George's Bakery here is being satisfactorily air conditioned with four roof-mounted air-cooled units despite an open baking area to the rear.

Peter G. Stratigos, owner, last year became unhappy with a water-cooled air conditioner with duct system that could not keep his customers cool. He called on M & R Air Conditioning Corp. in nearby Brooklyn to remedy the situation. He emphasized that he did not want any more ductwork in his store.

Ted Reina, president of M & R, determined that the single-story, neighborhood bakery had a 20-ton cooling load, as it did its baking right on the premises and in full sight of its customers.

Although an exhaust fan dispersed most of the baking heat to the outdoors, the air conditioners would have to keep the sales area under a positive pressure to prevent infiltration of the heat.

So, Reina said, the company installed four 5-ton Typhoon air-cooled packaged units on the roof directly above the sales floor. The units form a square pattern so that each unit, at full load conditions, can handle about a fourth of the sales area.

Ceiling diffusers connected with the units by short ducts were installed directly below them. Each diffuser, handling 2,000 c.f.m. of air, serves as both supply and return.

Stratigos commented that the new system has been performing well. It also provides him with considerable flexibility and economy. He can use any number of units he desires to keep the sales area at comfortable temperatures, turning them individually on or off to meet changing heat load conditions.

TWO OF FOUR ceiling diffusers over the sales area of George's Bakery in Rockville Center, N. Y., serve as both supply and return to the roof-mounted air conditioners directly above them.

ROOF TOP VIEW shows the four Typhoon 5-ton air-cooled air conditioners that provide flexible and economical cooling to the bakery.

Cooling Planned for $20 Million Insurance Bldg.

CHICAGO — Air conditioning will be a major feature of the 20-story, $20 million Hartford Fire Insurance Co. building under construction on Wacker Dr.

Curtain walls will be of glass and set back 4 ft. to provide canopies to protect against the sun's glare and provide access for window washing. The glass walls will be tinted gray and permanently fixed to prevent infiltration of dust and dirt.

Conditioned air will flow from the perimeter wall of each floor —designed to give an even flow of air.

Combination Diffusers Designed for Skyscraper Going Up In New York

NEW YORK CITY—One of the world's largest buildings, the 60-floor Chase Manhattan building now under construction here, will feature a system that combines lighting fixtures with air conditioning diffusers and loud speakers.

All of the fixtures will be recessed in continuous rows and will be flush with the ceiling.

The system was developed jointly by Skidmore, Owings & Merrill, architect of the building, and Lightolier, manufacturer of commercial lighting systems.

Lightolier will produce the 40,000 special fixtures required by the building's lighting system. It will be one of the largest commercial lighting systems installed in one building.

The concept of integrated lighting fixtures, air conditioning diffusers, and loud speakers will require 62,000 lbs. of 6063 T6 aluminum alloy extrusions. Olin Aluminum, an operation of the Metals Div. of Olin Mathieson Chemical Corp., will supply the aluminum extrusions.

Penn's service-proved controls

DO MORE JOBS WITH LESS INVENTORY

Here's a simplified line of single and two pole controls that reduces your inventory yet has the capacity to give you more flexibility in meeting all refrigeration and air conditioning requirements. Features include exclusive SNAPFLEX self-cleaning contact action and IN-LINE power unit which holds settings accurately.

In addition, the two pole heavy duty controls eliminate the need for motor starters when used on polyphase motors with built-in overload protectors. It's another plus economy feature! For complete information, ask your wholesaler then . . .

Try Penn on your next job!

Series 270 single pole and Series 1272 two pole single function for either low or high pressure. Also temperature models.

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270 SERIES		1272 SERIES	
115-V.	230-V.	115-V.	230-V.
16 Amps.	10 Amps.	24 Amps.	24 Amps.

*See Penn Catalog for polyphase ratings.

Series 271 single pole and Series 1273 two pole dual function. Temperature models also available.

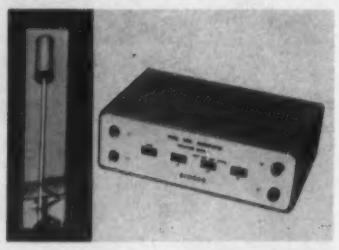
PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Singer Introduces Low-Cost Fuel Use Computer

● A "low-cost" analog computer that "automatically indicates average fuel oil consumption continuously—under all weather conditions—and relays the information to an easy-to-read control panel" was introduced recently by HRB-Singer, Inc., subsidiary of The Singer Mfg. Co., Dept. AH&RN, 90 Schureman St., New Brunswick, N. J.



Called the "Fuel Use Computer," the device was developed for fuel oil dealers "to provide a precise, up-to-the-minute means of determining the amount of fuel oil their customers are consuming," it was stated.

Installed in a dealer's plant or office, the unit employs a measuring principle that is reportedly more accurate than the old "degree day" system now in use.

Key components of the computer are a cylinder shaped analog rooftop unit and a recording console the size of a portable typewriter.

"Instruments inside the roof unit create an electrical equivalent, or analog condition of heated buildings exposed to weather," it was explained. "As weather changes . . . the analog unit adjusts its energy output to meet these changes. As it does, the change is relayed electrically into the recording console where it is measured in digital readings called 'weather units.'"

Each unit is delivered complete with roof brackets, lead-in-wiring reset box, and installation manual. Its cost is $485 per unit with one year written warranty.

Pressure Gauges Claim Extreme Accuracy

● A new series of "extremely accurate" pressure gauges, known as the "Master-test" line has been announced by Marsh Instrument Co., Dept. AH&RN, Skokie, Ill.

Made in all standard pressure ranges, and in compound and vacuum types, the gauges are individually dead-weight tested and guaranteed accurate within ¼ of 1% plus or minus of the maximum dial reading over the entire range, according to the company.

To assure accuracy of reading, a new type of dial, called the "Read-easy" dial, has been developed in which an inner arc shows major marking and an outer mark shows the finer graduations—a new type of scale (patent pending) which permits the gauge to be read with the accuracy of a caliper rule, the company said.

"Further reading accuracy is obtained by three reading methods —a twin-tip or gun-sight pointer; a new type of mirror scale, and a new 'Non-parallax' dial from which the observer always obtains a correct reading even when the dial is read at an angle."

Pollen-ex Furnace Filter Gauges Offered

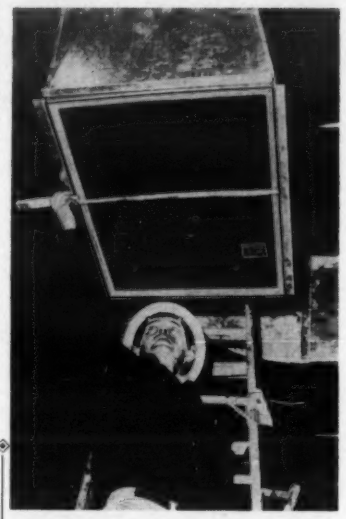
● Introduction of a new furnace filter gauge has been announced by Associated Mills, Inc., Dept. AH&RN, 303 West Monroe St., Chicago 6.

This gauge is designed for use with "Pollen-ex" furnace filters to provide a visual check on the filter's efficiency and signal the proper time for washing it out. It is marketed by Pollen-ex sales representatives and will be launched with a trade promotion.

"This promotion," the company said, "will permit the dealer to offer one of the new Pollen-ex filter gauges free with the purchase of two Pollen-ex furnace filters. The gauge lists at $2.95, the furnace filters at $9.95 each."

Want More Details?

ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.

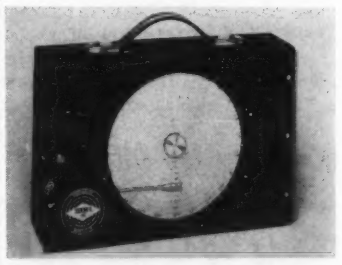


Ultralite Duct Liner Has Fire Resistant Coating

● "Ultralite," Gustin-Bacon's glass fiber duct liner, is now available at no extra cost with a newly developed-and-approved gray fire resistant coating, according to Gustin-Bacon Mfg. Co., Dept. AH&RN, 210 West 10th St., Kansas City 5, Mo.

"The new product carries a flame spread classification of less than 25, and complies with all the requirements of the National Board of Fire Underwriters' Bulletin #90-A and B and the strictest fire codes everywhere," the company said.

Ultralite duct liner carries an Underwriters' Laboratories label and is permanently stamped with density and flame spread classification, it was noted.



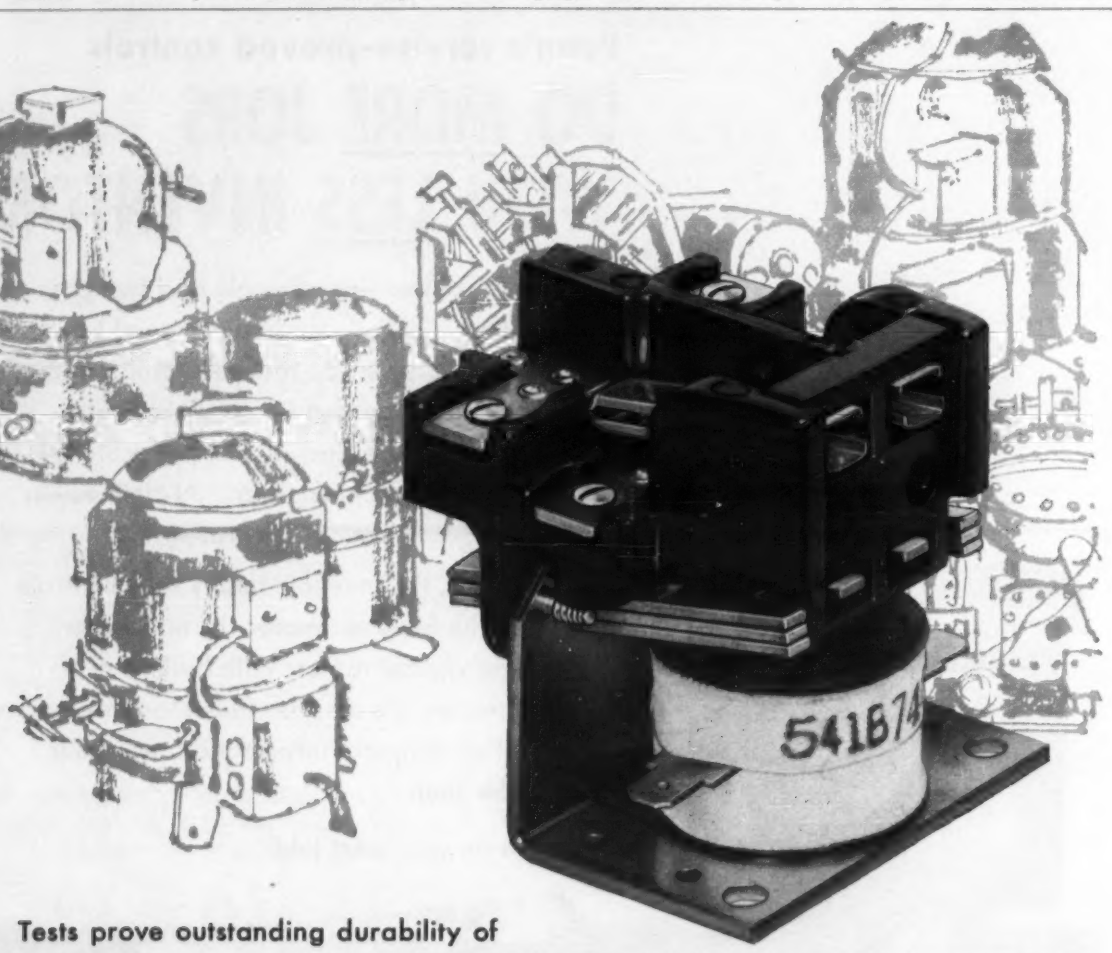
Serdex Offers New Line Of Portable Recorders

● A new line of "moderate-priced" portable circular-chart temperature and humidity recorders is being offered by Serdex, Inc., Dept. AH&RN, 12 Bowdoin Sq., Boston 14.

The line is so designed, the company emphasized, that either the humidity recorder or the temperature recorder can later be converted to a temperature-humidity recorder.

The record is obtained on a 24-hour, 6-in.-diameter chart powered by a mechanical spring wound drive or, on option, an electric drive. Size of the unit is about 10½ in. by 7 in. by 3 in. It weighs 4½ lbs.

Regarding the hygrograph, the company said the sensitive element of animal membrane diaphragm is guaranteed accurate within ±5% r.h. over the range of 15 to 95% r.h. within the temperature range of 32° F. to 130° F. Regarding the thermograph, it said the sensitive element of coil type bimetal is guaranteed accurate within ±2° F. over a range of 0° to 100° F.



Tests prove outstanding durability of

GENERAL ELECTRIC'S NEW CONTACTOR

EXHAUSTIVE LOAD-LIFE tests (in excess of 300,000 operations—make LR and break 125% of full-load current) have proved General Electric's new magnetic line contactor will give you dependable, long life operation in your air conditioning systems.

Recent tests at General Electric's Appliance Control Department subjected a 3ARR8 line contactor to a 40-day test that simulated 10–20 years of installed service. Test engineers reported that the Company's new contactor—designed for central residential air conditioning systems—passed tests two to three times greater than those required by industry standards.

PRACTICALLY FREE from contact bounce, the new G-E contactor is used for applications such as starting and stopping compressor and fan motors and auxiliary heating circuits on central air conditioning systems.

One-half pound contact pressure per pole provides positive make. Available weld breaking force of over two pounds per pole provides positive break. And the "kiss-free" action for all pick up and drop out voltages eliminates the greatest cause of contact failure.

FOR MORE INFORMATION, contact your General Electric Apparatus Sales Office or write Section 740-141, General Electric Company, Schenectady, N. Y. (Ask for GEA-6803A.)

QUALITY CONTROLS FOR YOUR REFRIGERATION AND AIR CONDITIONING APPLICATIONS

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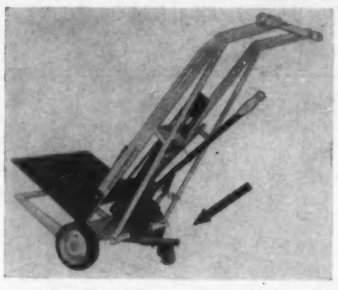


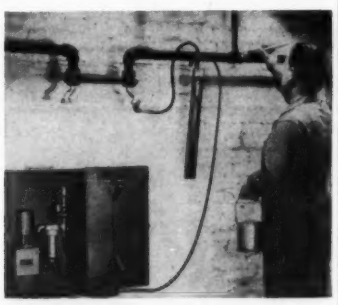
Shop Caddy's 3rd Wheel Takes Load Off Operator

● A new "load transfer wheel" attachment to the "Shop Caddy" has been announced by Grand Specialties Co., Dept. AH&RN, 3101 W. Grand Ave., Chicago 22.

The new "3rd wheel" takes the load off the operator and keeps it on the Shop Caddy itself making it possible to "truck" the load with minimum effort, according to the company.

"By simply 'lifting' the load —with the use of the 4-speed hydraulic Shop Caddy pump—to the correct height indicated on the side frame, the Caddy automatically rests on the new load transfer wheel attachment," it was explained. "The operator then simply 'pushes' without any need of actually 'holding up' the load.

"The Shop Caddy lifts from floor, moves, and lowers loads up to ¼ ton quickly and easily. It is used widely in shops, shipping rooms, etc., for lifting machinery, moving appliances, handling crates, installing dies, loading, and unloading trucks, etc. The Shop Caddy is available in either 36 in. lift or 54 in. lift."



Leak Seeker Makes It a One-Man Job

● A device which "converts the tedious job of finding gas leaks into a simple one-man instead of a two-man job" is now being manufactured by The DeVilbiss Co., Dept. AH&RN, Toledo 1.

Called the "Leak Seeker," the device is a small, electrically operated compressor which builds up and maintains a constant test pressure in low and intermediate pressure gas lines. It will pump lines to test pressure faster than the quickest hand methods and automatically holds the desired pressure to make leak detection quicker and more positive, according to the company.

One man can check the entire job, since once the Leak Seeker has built the desired pressure in the line, it will maintain that pressure indefinitely.

Self-contained in an "easy-to-carry" steel case, the unit weighs 24 lbs. It can be used with any of the type of manometers or gauges now utilized for testing low or medium pressure lines, according to DeVilbiss. Ten feet of air hose is provided along with 50 ft. of electric cord. It operates on regular house current. Price on the unit is $110 f.o.b. Toledo.

More details on the products described on this page may be obtained by writing the manufacturer at the address given in each story.

Delco Adds 4 Furnaces to 'Conditionair' Line

● Addition of two new gas-fired and two new oil-fired "Conditionair" furnaces to its line of residential heating units has been announced by Delco Appliance Div. of General Motors Corp., Dept. AH&RN, Rochester 1, N. Y.

The division said the "cabinet-type" models "are specifically designed for use in lower heat loss homes or in multiple unit, zone heating systems where dependable, low-cost installations are to be desired."

Regarding the gas-fired models, the division said the new Delco "flame tailored burner" incorporates all the features of a standard inshot burner plus a new air tube and stainless steel spreader. In the oil-fired models, it was stated fuel-saving operation is provided by the Delco fuel converter which combines the Delco oil burner with a stainless steel combustion chamber.

Models GBC 80-HR and OBC 70-HR are of counterflow design for perimeter heat distribution systems, while models GBC 80-H and OBC 70-H are designed for overhead duct systems.

'Koiled Kords' Offered for Truck-Trailer Use

● A new extra-heavy-duty coiled cord for truck-trailer standby refrigeration is being made available by Autac, Inc., Dept. AH&RN, New Haven, Conn., "long identified in the transportation field with the distribution of 4, 6, and 7-conductor retractile cords which eliminate electrical hook-up problems."

Designed for 3 and 4-conductor types, from 12 to 16 gauge, the reefer "Koiled Kords" meet Underwriters Laboratories' specifications.

"Koiled Kords provide new safety because the 'spring-like' retractability raises cords out of dangerous contact with water, oil, or grease on garage floors."

'Compensating Flue System' Improved

● An improved, patented "Compensating Flue System" claimed to insure adequate air supply under all conditions of operation has been developed by Eclipse Fuel Engineering Co., Dept. AH&RN, Rockford, Ill.

Design of system features twin dampers controlling flue and air inlet openings at the same time and by the same operator. Dampers may be controlled by limit switches for open position start, and closed position for shutdown of combustion equipment.

The system was developed "to meet the requirement of any blast-fired gas furnace, boiler, or other heating device for a minimum of 10 cu. ft. of air for each 1,000 B.t.u. of fuel burned," the company said.

License without charge will be granted to any company applying in writing for use of this system, according to the firm's announcement.

Float Vent Valve Features Silicone Seat

● A silicone seat that is said to prevent metal-to-metal contact and insure a tighter close even when foreign matter is present is one of the features of the new model 200 float vent valve developed by The Dole Valve Co., Dept. AHRN, 6201 Oakton St., Morton Grove, Ill.

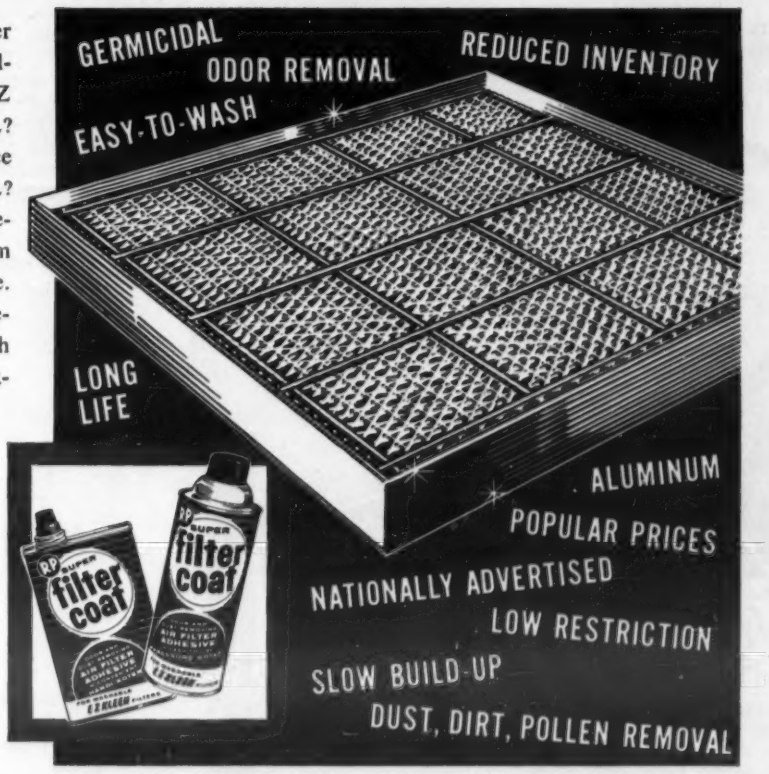
Intended for pressures up to 35 p.s.i., the valve has a heavy nickel plate finish that prevents corrosion, according to the company. It is designed for any hot water heating system or chilled water cooling system.

Complete specifications of the model 200 float valve are available.

Here's why

RP® / E Z KLEEN® AIR FILTERS ARE YOUR BEST DEAL!

Whatever you're looking for in filter selling features—the E Z Kleen Air Filter has it! ODOR REMOVAL?...an E Z Kleen first—since 1956. GERMICIDAL? ...E Z Kleen filters have had it since 1956. DUST AND POLLEN REMOVAL? ...the best, because of unique baffle design. PROFIT?...you're protected from cut-rate operators. And, there's more. Check the list below...compare...decide for yourself. You'll do better with E Z Kleen Air Filters—and you get extra profits through the sale of ...



RP® SUPER **filter coat**

AIR FILTER ADHESIVE

—now in a choice of either the Handi-Koter (with self-contained, finger-operated sprayer) or Pressure Koter (the pressurized sprayer).

Check **ALL THESE "BETTER FOR YOU" FEATURES AND** *Compare* **WITH ANY OTHER FILTER MADE!**

HIGH EFFICIENCY
by test, stops more dust, dirt, pollen.

ODOR REMOVAL
traps and holds annoying household odors.

GERMICIDAL
Super Filter Coat contains two bacteria and fungi destroying agents, hexachlorophene and sodium propionate.

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EASY-TO-CLEAN
water soluble Filter Coat *has built-in detergent* to make washing simple.

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the first popular priced all-metal filter.

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and slow build-up reduces "no heat" complaints.

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Dept. 20, Madison 1, Wisconsin

Heat Rejection (1)

Important Factors In Maintaining Proper Condensing Temperatures Outlined

Maintaining proper condensing temperatures is one of the most important factors involved in the satisfactory performance of a mechanical refrigeration system.

In this discussion of "Heat Rejection" originally presented at the California Association RSES Workshop at California State Polytechnic college earlier this year, Harold Halls has done an outstanding job of presenting in concise form information on the vital elements in the condensing side of the cycle, primarily:

(1) Sources of heat to be rejected; (2) effect of high or low condensing pressures; (3) types of condensers and factors in selecting them.

By Harold A. Halls, Manager
Recold Corp. Refrigeration Products

HEAT QUANTITIES

The quantity of heat rejected from a refrigeration system is always greater than that taken into the system through the evaporator. There are three major sources of this total heat:

1. That absorbed by evaporating the refrigerant,

2. That added in superheating the vapor on its way to the compressor, and

3. The heat of work done in compressing to a pressure at which it will condense.

With the exception of the heat radiated from the compressor head and from the discharge line, all of this heat much be rejected from the system at the condenser. For the purpose of uniformity, and to stay within practical application practices, this discussion will assume the suction vapor to be superheated to 80° F. on entering the compression stroke.

Condenser capacities, when stated in tons (without further clarification), usually refer to 15,000 B.t.u. tons, or on the basis of rejecting 125% as much heat as taken in at the evaporator. If we disregard the heat given up before the gas reaches the condenser, we would have conditions as shown on Chart No. 1 where a 125% factor is correct only for evaporating at 40° and condensing at 100°.

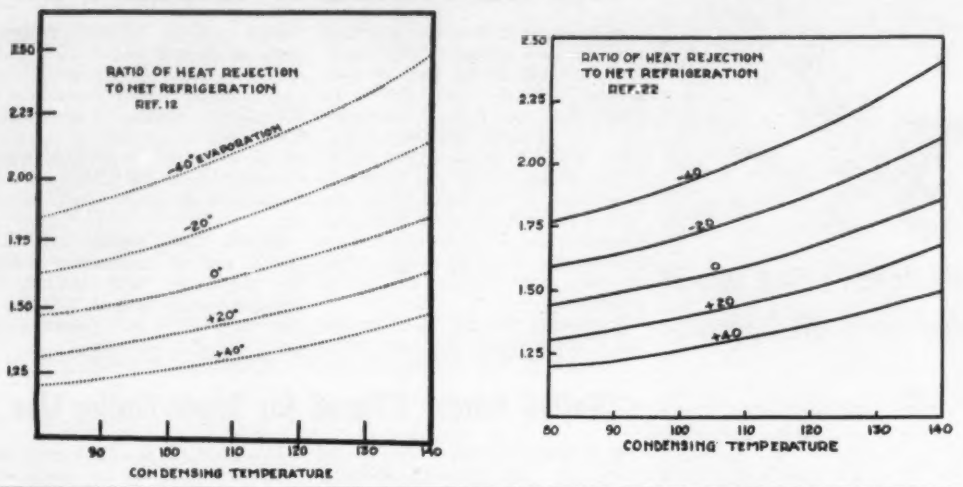
But as some heat is lost in the way to the condenser, a correction factor of 114% rather than 125% is more realistic for +40° to 100°. A 15,000 B.t.u./ton rating is approximately correct for 15° evaporating and 105° condensing.

Further study of Chart No. 1 shows a wide variation in the heat that must be rejected under various evaporating and condensing conditions — from less than 125% (+40° to 100°) to 250% (-40 to 140°). If a condenser, rated in tons, will reject 15,000 B.t.u./rated ton, it cannot be correct for both +40° and -40°, even at the same condensing temperature. Further reference to this will be made later in the discussion.

Before discussing various types of condensers and methods used, it will be well to look at widely fluctuating condensing temperatures and the effect this has on the entire system. Chart No. 1 clearly shows how condenser loading is affected by either low suction temperatures or by high condensing temperatures. It is an unfortunate situation (especially for the owner) when high condensing occurs on a low temperature application.

A high condensing temperature (pressure), the result of the inability of the condenser to dissipate the heat brought to it, would simply add to the work of the condenser, which is already overloaded, unless other compensating factors occurred. If this were true (no compensating factors), the heat being brought to the condenser would continue to increase in an ever rising crescendo. One of the compensating factors accompanying a rise in condensing pressure is a marked decrease in compressor capacity.

Chart No. 1—Ratio of Heat Rejection to Net Refrigeration



COMPRESSOR CAPACITY

The decrease in compressor capacity is considerably more critical at low evaporating temperatures than at commercial or high evaporating temperatures. Table No. 1 shows, in percentage, actual capacities taken from the catalog of a prominent compressor manufacturer. Condensing at 105° is used as a datum point and the compressor capacity at 105° condensing is rated at 100%. With 0° evaporating the loss of compressor capacity at 130° condensing is 23%. At -30° evaporating the decrease would be 48°.

Table 1—Compressor Capacities at Various Suction and Condensing Temperatures

(105° Condensing Rated 100%)

Suction Temp.	Condensing Temp. 105°	110°	115°	120°	125°	130°
0°	100%	96%	92%	88%	83%	77%
-10°	100	95	90	85	79	72
-20°	100	94	88	82	74	66
-30°	100	91	81	72	62	52

DISCHARGE TEMPERATURES

A further consideration of high condensing pressures is the affect on discharge temperatures. Because the gas, being discharged, is in a highly superheated condition, the commonly referred to pressure-temperature relations do not prevail and, consequently, do not reveal these temperatures. Many fac-

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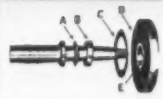
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Heat Rejection--

(Continued from preceding page)

tors enter into the resulting discharge temperature. The principal factors are:

(A) Evaporating temperature,

(B) The temperature to which the suction vapor is superheated by the time it enters the compression stroke, and

(C) The pressure to which it must be raised in order to condense.

Chart No. 2 shows the discharge temperatures that will result at various suction and condensing temperatures if suction vapors are superheated to 80° on entering the compression stroke. The chart includes curves for R-12 and R-22. Note that temperatures well in excess of safe limits, for oil, are experienced with relatively low condensing when -40° evaporating is involved.

One practical way of reducing these discharge temperatures is to insulate suction lines of low temperature coils so that the suction vapor returns to the compressor close to the saturation temperature.

LIQUID LINE PRESSURE DROP

Simply because high condensing pressures are harmful to a system, and seriously reduce system capacity, it does not follow that low condensing pressures have a beneficial effect. Some pressure drop must occur between the receiver and the expansion valve in order to cause the liquid refrigerant to flow at a proper rate. This pressure drop can be as much as 15 p.s.i. to 20 p.s.i.—even in a properly installed job.

With R-12 or R-22 a static loss of approximately .5 p.s.i. occurs in each foot of vertical rise. A vertical rise of 20 ft. (R-12) would result in an 11 p.s.i. static loss, without flow. The dynamic loss caused by flow through the tubing, valves, driers, fittings, etc., could easily result in a total loss of 20 p.s.i.

(To Be Continued)

Summary

1. Excessively high condensing temperature causes:

(a) Reduced compressor capacity

(b) High discharge temperatures

2. Too low condensing temperature causes:

(a) Flash gas in the liquid line

(b) Possible partial starving of the evaporator

3. The quantity of heat to be rejected, per unit of refrigeration, is not the same for all applications.

4. The selection of a condenser must result from careful consideration of all factors.

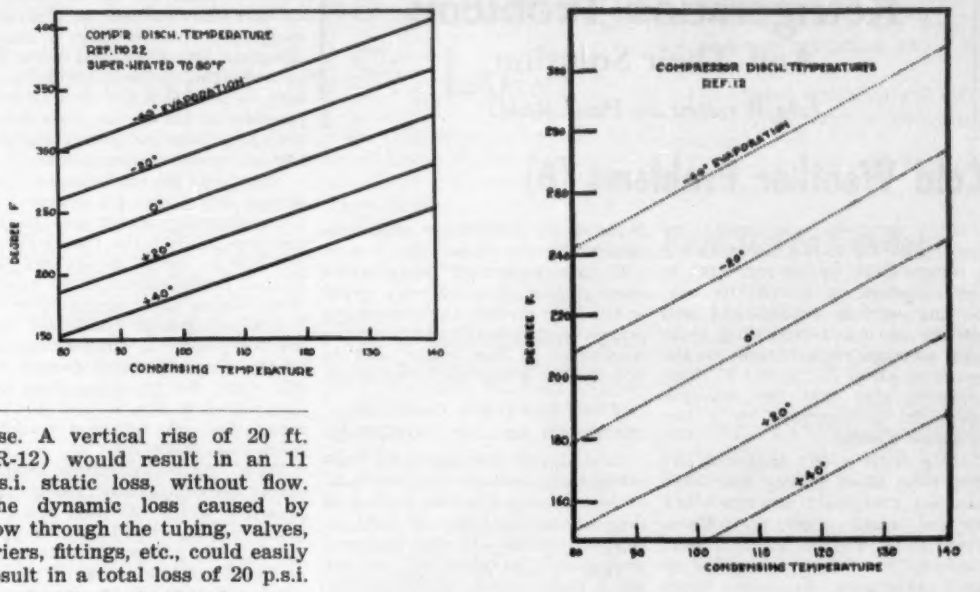
5. Closely controlled condensing conditions will result in:

(a) Less service on all system components

(b) Proper refrigeration the year around

(c) Satisfied customers

Chart No. 2—Compressor Discharge Temperatures



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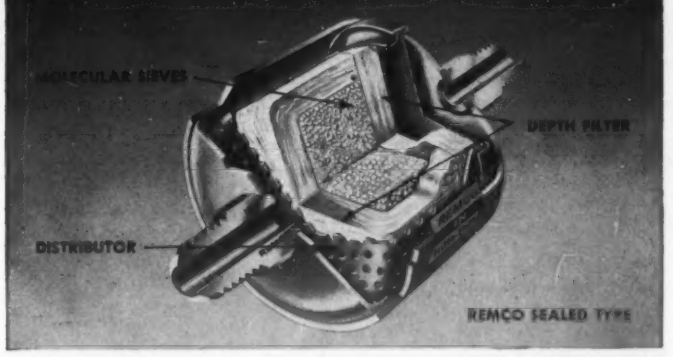

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Refrigeration Problems
And Their Solution
(As Written by Paul Reed)

Cold Weather Problems (6)

In a previous instalment we found that 40° is just about as low a temperature as we can have in the basement in which the condensing unit is located and still operate on a self-defrosting cycle with average temperatures in the cooler of about 37° to 38° F. This assumed also that the machine operation is controlled by a low pressure control.

Even with a 40° basement we may have short cycling and other troubles previously described, but we can usually "get by." Moreover, there will be little, if any, tendency for the refrigerant from the evaporator to pass down through the suction line and condense in the compressor crankcase during the idle cycle.

If the basement temperature drops below about 40° we begin to run into trouble in maintaining proper temperatures and humidity conditions in the cooler and in keeping the evaporator free of ice.

TEMPERATURE CONTROL INSTEAD OF L.P. CONTROL

In addition, we begin to have refrigerant condense into the compressor during the idle cycle and this can be the cause of very expensive trouble. If the basement temperature is below 40°, we can use a temperature control instead of a low pressure control.

The bulb of the temperature control is attached to the evaporator and set to cut in at whatever temperature is necessary to obtain complete defrosting, and to cut out at whatever temperature is necessary to maintain the desired temperature in the cooler. This forces the compressor to operate, regardless of basement temperature.

Much of the refrigerant condenses from the evaporator into the compressor which may be, for example, at 35°, but the compressor will be forced to operate and furnish refrigeration to the evaporator during the running cycle.

The refrigerant condensed into the compressor is absorbed by the oil in the crankcase during the idle cycle, for the oil is cold, and cold oil will absorb and hold a great deal of refrigerant—much more than warm oil.

Then the temperature control starts the compressor. The suction pressure, which has been about 36 or 37 p.s.i.g., is suddenly dropped perhaps 10 p.s.i.g., to around 26 p.s.i.g. It is also characteristic of oil that it will hold more refrigerant at a higher pressure than at lower pressures. As soon as the pressure is dropped from 36 p.s.i.g. to 26 p.s.i.g., the oil is unable to hold as much refrigerant, so some of the refrigerant is released from the oil.

OIL SLUGGING IN COLD BASEMENTS

This causes the oil to foam and become violently agitated. Much of it gets up around the pistons and is pumped over past the pistons. It gets into the cylinder and is pushed through the discharge valves.

But oil is a liquid; it cannot be compressed as a gas can, so it cannot pass as rapidly as a gas through the small orifices in the discharge valves that were sized for the passage of gas. Thus, we have "oil slugging." Also, there may be some liquid refrigerant lying in the cold portion of the suction line in the basement.

In either case, the compressor which is designed to pump gas efficiently is forced to pump a liquid. The least that can happen is excessive wear of the pistons, rings, cylinder walls, bearings, pins, seal, and other frictional parts, due to the oil being thinned by refrigerant and therefore having less lubricating value.

Not uncommonly there is more severe damage to the compressor —breakage of rods, shafts, or pistons. The author has seen the spokes of the compressor pulley broken by the severe shock of "oil slugging." Oil slugging is rarely due to a defective compressor, but is almost always due to excessive refrigerant in the oil in the crankcase.

Oil slugging is usually at its worst just after the compressor starts. Not only is most of the refrigerant and oil soon pumped out of the crankcase (probably leaving an insufficient amount of oil for adequate lubrication), but as the suction pressure is reduced and the crankcase warms up, the oil left gradually loses most of the refrigerant absorbed in it, and there is little foaming of the oil.

Eventually the oil pumped over gets back to the crankcase, but in the meantime the wearing parts are operating without sufficient lubrication, and excessive wear results.

So using a temperature control on installations in which the compressor is located in a cold basement may be only part of the solution. It may result in much better refrigeraion in the cooler than if a low pressure control is used, but it does not prevent the damage to the compressor.

SUCTION LINE SOLENOID VALVE TO PREVENT SLUGGING

One means of preventing the condensation of refrigerant from the evaporator to the compressor is by the use of a solenoid valve in the suction line. Preferably, it should be located near the cooler, so as to prevent refrigerant from condensing into the cold suction line in the basement.

This solenoid valve must, of course, be open during the running cycle, but closed during the idle cycle in order to prevent condensation of refrigerant from the evaporator to the compressor. That is, it must be open when the compressor is running, and closed when the compressor is not running.

Its wiring connections are therefore quite simple: It sholud be wired in parallel with the compressor motor, so that when the condensing unit starts, the valve opens and stays open as long as the compressor motor is running. It should close when the compressor motor stops, and stay closed all during the idle cycle.

The voltage of the solenoid valve should therefore be the same as that of the compressor motor. However, by using an auto-transformer, it is possible to use a solenoid of different voltage from that of the compressor motor.

Such a suction line solenoid may be used with a low pressure control, but the tube connection to the low pressure control must be tapped into the suction line between the evaporator and the solenoid valve rather than into the compressor crankcase or suction service valve on the compressor as is customary. Otherwise with the solenoid valve closed during the idle cycle, the low pressure control would not be actuated by a rise in evaporator pressure.

One objection to the use of a suction line solenoid valve is its cost. Its orifice should have a free opening as large as the suction line so to not restrict the flow of gas through the suction line. That large a solenoid valve may be rather costly.

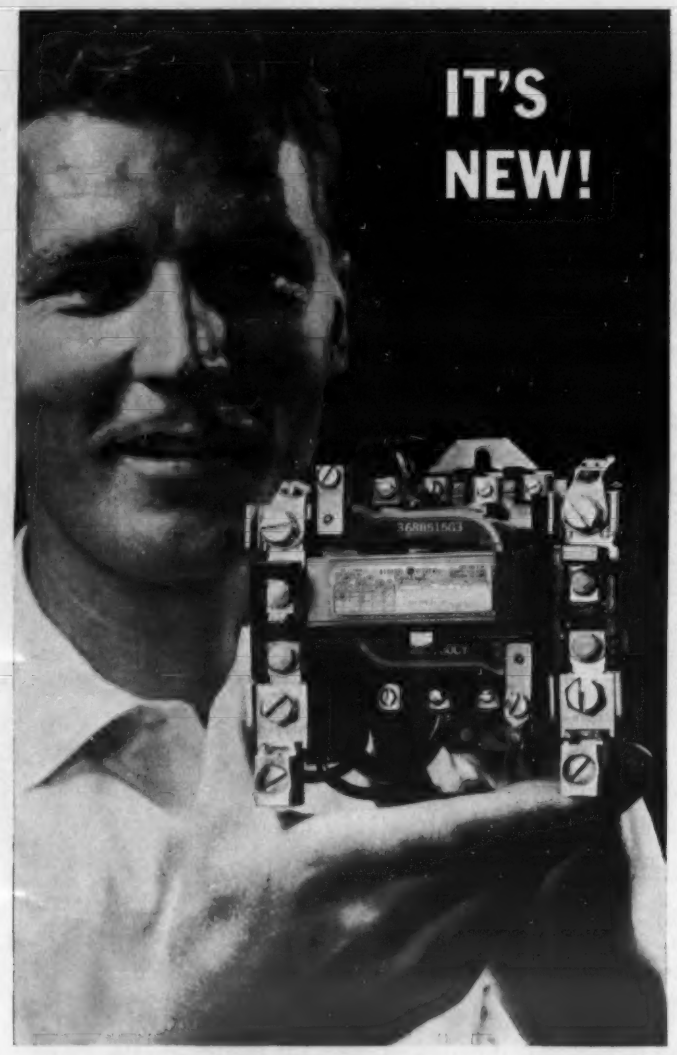
LIQUID LINE SOLENOID NOT AS EFFECTIVE

Another way is to use a liquid line solenoid valve controlled by a thermostat, and a low pressure control to start and stop the compressor. This is the familiar "pump-down" method used in air conditioning.

It allows the use of a smaller and less costly solenoid valve but requires the additional control, so the total cost is apt to be about the same as that of the larger suction line solenoid valve.

Moreover, although the pump-down method is successfully used in air conditioning, it is not so successful in medium and low temperature installations, the colder evaporators of which are more difficult to completely pump out than the higher temperature evaporators used in air conditioning. Also it is harder to assure complete defrost during idle cycle.

(To Be Continued)



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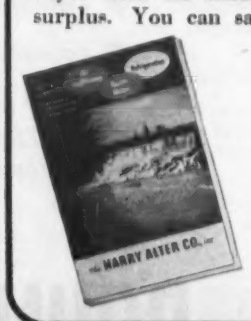

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KNOXVILLE, Tenn. — John Thomason and King B. Walker, city tax assessors, have announced that "air conditioning units in businesses can be considered real estate, personal property, or merchandise for tax purposes."

They said that such air conditioning units "are considered real estate when they are permanent-type fixtures that go with the building. They are considered as personal property in some cases and as ad valorem when owned by the lessee and moved into another's building. It all depends on the circumstances."

Chicago BHCC Elects Bornquist President

CHICAGO — A newly-elected board of directors for 1959-60 headed by President George Bornquist, of Bornquist, Inc., was announced by the Chicago Better Heating-Cooling Council at its annual meeting.

Bornquist, last year's vice president of the Chicago group, an affiliate of the national Better Heating-Cooling Council, succeeds outgoing President Joseph Baldwin, J. P. Baldwin Co.

Tribute was formally made to Baldwin in recognition of the outstanding leadership he has provided during the Chicago Council's first year of operation.

Other newly-elected CBHC officers are L. E. Rosengren, Columbia Pipe & Supply, vice president, and Neal Hardy, James W. Hardy, Inc., secretary-treasurer.

Women's Congress Meets In Oct., May

NEW YORK CITY — The third Annual Congress on Better Living will convene twice within the next ten months, first during the week of Oct. 5, and later, during the first week of May 1960, according to *McCall's* magazine.

In October, 1,500 women delegates throughout the country will meet in groups of ten in 150 cities to discuss the whole area of family interests, including houses and home products.

During the first week of May 1960, 100 delegates especially chosen from the October meeting will convene for the traditional three-day Congress on Better Living in Washington, D. C., for a closer focus on the subject of home life.

The "Congress," sponsored for the third consecutive year by *McCall's*, is a direct outgrowth of the Government-sponsored "Women's Congress on Housing" founded in 1956 by the U. S. Housing & Home Finance Agency, the magazine noted.

Offers Dylite Brochure

PITTSBURGH — A new brochure (C-9-271) illustrating the refrigerating and air conditioning applications of "Dylite" expandable polystyrene is available from the Plastics Div., Koppers Co., Inc., 801 Koppers Building, Pittsburgh 19, Pa.

NWAHACA Plans Committee Meetings Just Prior to Convention In St. Louis

CLEVELAND — Schedule of committee meetings and a skeleton outline of the 46th annual convention were announced by Tom Byrd, president of the National Warm Air Heating & Air Conditioning Association.

The 1959 annual committee meetings and convention will be held in St. Louis, with all sessions at the Chase-Park Plaza Hotels. "We urge that all segments of the ducted heating and cooling industry plan now to attend the annual convention," Byrd said.

Committee meetings will be held on Monday, Tuesday, and Wednesday, Nov. 30, Dec. 1 and 2. The convention will convene at 2:30 p.m. on Wednesday, Dec. 2.

Business to be covered at this session will consist of a review of actions taken by committees and the association's Board of Trustees during their meetings. Plans for the association's activities during 1960 and other future programs will be covered at this session. Election of officers and members of the Board of Trustees will conclude the opening day's program.

Convention activity will begin at 9:30 a.m. on Thursday with a general session for all convention delegates. The program will include complete coverage of the Silver Shield Program and other pertinent matters.

Highlight of Thursday's luncheon session will be a talk by a nationally-known speaker.

On Thursday afternoon two separate convention sessions will be held simultaneously. Both of these sessions will be open to all those attending the convention—dealer-contractors, wholesalers, manufacturer representatives, and other interested persons.

One of the Thursday afternoon sessions will deal with subjects of specific interest to manufacturers, while the other will be aimed at business operations of dealer-contractors.

A social hour for all convention delegates and friends is planned for Thursday evening.

Both the morning and afternoon sessions on Friday, Dec. 4, are designed to aid dealer-contractors and will continue the discussion of business management subjects begun the day before. These sessions are open to all persons attending the convention.

The Friday luncheon will have another nationally-recognized speaker.

The convention will conclude on Friday afternoon.

Penn Issues Catalog

GOSHEN, Ind.—A new catalog of cooling and air conditioning controls is now available from Penn Controls, Inc. here.

New listings include line voltage heating and cooling thermostats which supplement several previously cataloged thermostats.

Penn's extra heavy duty, two pole refrigeration controls, designated Series 1272 and 1273, are also shown in Bulletin 1487-AK.

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TECHNICAL CENTER

By Frank J. Versagi, Technical Editor

Handling Refrigerant Cylinders (1)

Mistakes in handling refrigerant cylinders are quite common in the field. The newcomer doesn't know better; the old-timer once knew better but has forgotten; contempt bred by familiarity is responsible for some of the unsafe practices. Du Pont has recently re-issued a bulletin reviewing general safety precautions to be observed in working with "Freon"-type refrigerants.

It is not unreasonable to suggest a reading of the following information, and the posting of it in the service shop.

HANDLING AND USE OF REFRIGERANTS FOR SERVICE WORK

The repair and maintenance of refrigeration and air conditioning systems require handling refrigerant cylinders and disposable containers. Servicemen have a responsibility to themselves and their coworkers to know and practice safe handling procedure. Although the Interstate Commerce Commission prescribes how much refrigerant can be loaded into containers of all sizes and specifies both the working and test pressure of these containers, a liquefied compressed gas cylinder can be dangerous when in the hands of an inexperienced or careless person.

These are some of the facts always to keep in mind about cylinders containing "Freon" refrigerants.

1. Fusible metal plugs are designed to protect the cylinder in case of fire. They may not protect the cylinder from gradual and uniform overheating.
2. The Interstate Commerce Commission prescribes that a liquefied compressed gas container shall not be liquid-full at 130° F. Refrigerant cylinders are loaded in compliance with this regulation.
3. Above 130° F., liquid refrigerant will completely fill a container and hydrostatic pressure will build up rapidly with each degree of temperature rise.
4. Fusible metal plugs begin to soften at 157° F. and melt completely at 165° F. Hydrostatic pressure developed at 157° F. is far in excess of cylinder test pressure.
5. To provide for some margin of safety, never heat a cylinder above 125° F.
6. Never apply a direct flame to a refrigerant cylinder.
7. Never place an electric resistance heater in direct contact with a refrigerant cylinder.
8. Never transfer refrigerant from one container to another.
9. Do not drop, dent, or abuse refrigerant cylinders.
10. Always replace hood cap and valve cap when cylinder is not in use or when cylinder is empty.
11. Use suitable valve wrench for opening and closing valve. Loosen valve packing nut before turning valve stem.
12. Secure all cylinders in upright position with chain or strap when they are not mounted in suitably constructed stand for withdrawal of refrigerant.

Refrigerant-12 is supplied for field service work in 15-oz. disposable pressure cans, and in 10-lb., 25-lb., and 145-lb. cylinders. Meticulous care is taken in maintaining purity of refrigerants during manufacture and packaging. It is virtually impossible to transfer refrigerant without admitting air and moisture. Receiving cylinders often contain rust and oil. Therefore, refrigerants should be purchased in the size container most adaptable to shop requirements.

Disposable cans might fill the requirements of small shops while use of 145-lb. cylinders would be justified in shops having a large volume of service business. Ten and 25-lb. cylinders are intended for use where portability is important.

As a general rule, small air conditioner systems are vapor charged. When refrigerant vapor is withdrawn from a cylinder, the cylinder becomes cooled since liquid must vaporize to replace the withdrawn vapor.

At normal ambient temperature the pressure in a cylinder is more than sufficient for vapor charging. As a matter of fact, vapor flow at the cylinder valve should be throttled to maintain a charging pressure of 10 to 15 p.s.i. above the system low side operating pressure.

At 70° F., Refrigerant-12 has a saturation pressure of 70.2 p.s.i.g. At 40° F., the saturation pressure is 37 p.s.i.g. Since refrigerant vapor is charged into the suction line, it must be charged against evaporator pressure. A system which is low on refrigerant usually operates at low evaporator pressure, while under normal conditions the evaporator pressure is 40 p.s.i.g. or less. The difference between a cylinder pressure of 70 p.s.i.g. and a system low side pressure of 40 p.s.i.g. is 30 p.s.i. This differential is sufficient for good vapor flow to the system. However, the pressure in the cylinder will decrease as the refrigerant cools. Therefore, it often becomes necessary to supply heat to a cylinder to maintain adequate charging pressure.

(To Be Continued)

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

WHAT . . WHEN . . WHERE

—A Guide to Coming Events of Interest

National Institute of Locker & Freezer Provisioners Convention
Sept. 13-16, Netherland-Hilton hotel, Cincinnati.

Refrigeration & Air Conditioning Contractors Association Convention
Sept. 27-30, Ambassador hotel, Los Angeles.

Midwest Association—Refrigeration Service Engineers Society Educational Conference
Oct. 1-3, Lafayette hotel, Little Rock, Ark.

American Gas Association Convention
Oct. 5-7, Conrad Hilton hotel, Chicago.

National Frozen Food Distributors Association Meeting
Oct. 25-28, Sherman hotel, Chicago.

Refrigeration Service Engineers Society Convention
Oct. 30-Nov. 2, Atlantic City, N. J.

Air-Conditioning & Refrigeration Institute Membership Meeting
Nov. 1, Haddon Hall, Atlantic City, N. J.

Air-Conditioning & Refrigeration Wholesalers Meeting
Nov. 1-2, Atlantic City, N. J.

National Commercial Refrigerator Sales Association Convention
Nov. 2-4, Traymore hotel, Atlantic City, N. J.

11th Exposition of the Air-Conditioning & Refrigeration Industry
Nov. 2-5, Convention Hall, Atlantic City, N. J.

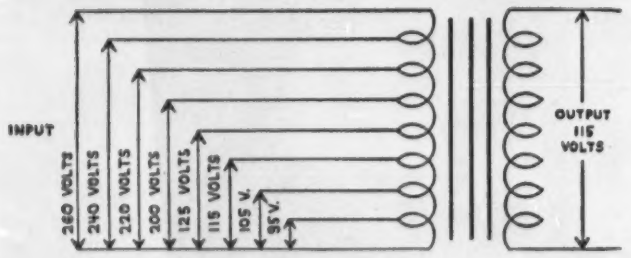
National Hotel Exposition
Nov. 2-6, Coliseum, New York City.

National Electrical Manufacturers Association Meeting
Nov. 9-13, Traymore hotel, Atlantic City, N. J.

The Institute of Boiler & Radiator Manufacturers Meeting
Week of Nov. 9, Seaview Country Club, Absecon, N. J.

National Warm Air Heating & Air Conditioning Association Meeting and Convention
Dec. 1-4, Chase Park-Plaza hotel, St. Louis.

WHAT YOU SHOULD KNOW ABOUT
TAPPED WINDING TRANSFORMERS



• Tapped winding transformers, solve both sales and installation problems, inexpensively. For example; where an air conditioner, refrigerator, or other appliance, powered by a 115 volt motor is to be installed in a location where only 230 volt power circuit is available, a tapped winding transformer plugs into the power circuit and supplies 115 volt service to the appliance.

Or, as another example; where the appliance installation is made in a location where supply voltage is *below* the normal required for good motor performance (105 volts or lower) then the input line connected to the proper taps can improve the low voltage condition and provide 115 volt service.

As shown in the diagram this transformer is designed with taps for 260/240/220/200/125/115/105/95 volts primary connection and when connected to the proper primary taps will provide a 115 volt source of supply.

Available in ratings of 350, 550 and 750 VA. Other models provide 230 volt output from 208 volt available circuits. Write for Bulletin TW-320.

ACME ELECTRIC CORPORATION
929 WATER STREET CUBA, NEW YORK

Acme ACME Electric
TRANSFORMERS

FORCE-FLOW LIQUID CHILLER

Circulates, refrigerates and/or heats water, liquid chemicals or acids. Corrosion resistant, stainless steel interior. ¼, ½, and ⅓ h.p. sizes. Various temperature ranges. Tolerances as close as ±/10°F. plus or minus.

Standard Model

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Manufacturers of Specialized Cooling and Heating Equipment for Industries
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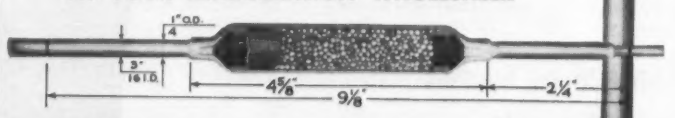
• **Driers are completely dehydrated** and the ends fused and sealed to insure dryness. KMP's undercutting feature permits tubes to be quickly snapped off, as well as cut off, swedged, flared or bent to take care of all field applications from capillary sweat connections to ¼" flare.

Also available
is a complete line of KMP silica gel and molecular sieve moisture magnets. A minimum of models will handle ¼ to 10 ton units. All are backed by KMP—leading supplier to over 80% of the original equipment manufacturers.

SEE THE KMP COMPLETE LINE AT YOUR REFRIGERATION WHOLESALER



KMP KENMORE MACHINE PRODUCTS, INC.
LYONS, NEW YORK
Driers • Accumulators • Accumulator Driers • Strainers • Capillary Assemblies

RACCA Convention Program--

(Concluded from Page 1, Col. 4)

Session I

9:45 a.m.—"Prospecting for Profits," with industry action. "Your Profits Are Too Low!" Jack K. Carney, president, Commercial Refrigeration Co., Los Angeles.

9:55 a.m.—"How Your Association Can Clear the Way for Profits in Your Business," George H. Moore, vice president, Bank of America; specialist in contractor loans.

10:20 a.m.—Coffffee break.

10:40 a.m.—"Assured Profits Through Good Management," Rudy Berg, president, Air-Conditioning & Refrigeration Institute (ARI).

11:25 a.m.—"One RACCA Association Makes Profits Easier," William Moody, president of RACCA, Houston, Texas, and president of Barber, Inc.

Noon—"Blueprint for Action," summarized by Action Committee: R. B. Garlock, Garlock Insulating Co., chairman; Harvey W. Hottel, Harvey W. Hottel, Inc., Washington, D. C.; Herschel O. May, Industrial Installations, Inc., Berkeley.

3 p.m.—Convention trip.

4:30 p.m.—Aquatic circus at Marineland of the Pacific.

6:30 p.m.—Dinner at Marineland Restaurant.

TUESDAY, SEPT. 29
Session II

Chairman, I. F. Le Grand, Air Engineers, Inc., Fullerton, Pa.

9:10 a.m.—Introduction of Eugene H. Ballard, business manager, Refrigeration Fitters Branch of Local 250, United Association.

9:15 a.m.—"Profits with Trained Personnel," Dean J. A. C. Grant public representative of the Joint Journeyman and Apprentice Training Committee (Los Angeles and Orange Counties).

9:35 a.m. — "Trained Apprentices," Harry L. Bowe, apprentice coordinator, Los Angeles.

9:55 a.m.—"The National Office (U.A.) and the Training of Apprentices," Joseph Corcoran, apprentice coordinator, United Association.

10:15 a.m.—"The Labor Organization and Profits for Contractors," Henry B. Ely, general counsel and western representative, national RACCA.

10:35 a.m.—Coffee break.

10:55 a.m.—"How the Refrigeration and Air Conditioning Department (U.A.) Can Help the Contractor Make Profits," Joseph Monahan, general organizer, United Association.

11:15 a.m.—"Cooperation for Mutual Profit," Peter T. Schoemann, general president, United Association.

11:50 a.m.—"The National Association and the United Association," Leo Howard Kerns, managing director, national RACCA, who will lead a discussion and question and answer period on the morning's program. Kerns will be assisted by the Action Committee.

12:30 p.m.—Luncheon.

2 p.m.—Business meeting for members only.

"Report of the President," Tom Alexander. Subjects: Joint Activity Program, Joint Industry Committee, mergers.

Report of Resolutions, Credentials, Nominating Committees.

Election of president and incoming directors.

3:15 p.m.—Board of directors' meeting.

7:30 p.m.—Annual dinner.

8:30 p.m.—Outgoing president's message, presentation of gavel. Incoming president's acceptance.

8:45 p.m.—Presentation of new officers and board members.

9 p.m. Annual dance and dance contest.

WEDNESDAY, SEPT. 30
Session III

Chairman, Robert S. Lafferty, Hill-York Corp., Miami, Fla.

9:10 a.m.—"Profits Through Advertising," Ken McNeill, McNeill & McCleery, advertising consultants, Los Angeles.

9:40 a.m. — "There Are Profits in Service," Al Hanson, president National Refrigeration Sales.

10:10 a.m. — "Consulting Engineers Can Make the Job More Profitable," Ralph M. Westcott, national president, the Consulting Engineers Council.

10:40 a.m.—Coffee break.

11 a.m.—"How the Wholesaler Can Pave the Way for Contractors' Profits," L. P. Glass, past national president, Air Conditioning & Refrigeration Wholesalers Association (ARW).

11:30 a.m. — "Prospecting with the Suppliers for Profits," George T. Howe, Accurate Heating & Cooling Corp., Chicago.

Noon—Action Committee's final recommendations on the work of the convention.

12:45 p.m. Adjournment.

3 p.m.—Trip to Disneyland.

7 p.m. Dinner at Disneyland Hotel; conclusion of convention.

A complete program for the ladies has also been arranged.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Fedders Bows 38 Room Conditioners--

(Concluded from Page 1, Col. 5)

limited basis last week. Full production is anticipated by November with peak capacity to be reached in December.

The new air conditioners were unveiled to Fedders distributors by Salvatore Giordano, president and board chairman of Fedders Corp., in a series of six regional meetings.

There are three 1-hp. models in the Fedders Minute Mount series. nne unit is designed for installation in casement windows, while the others are for standard double-hung type windows.

The 1-hp. casement model, 10CM-2 measures 14 in. wide, 10½ high and 22½ deep. It has a thermostat and two fan motors with the evaporator fan operating at two speeds. Announced capacity is 7,000 B.t.u.

"This model is insalled simply by removing the glass from one casement section and sliding the air conditioner into place," it was explained. "Two steel gravity locks hold the unit fast at the bottom and slide latches grip it at the top. A rubber gasket, an integral part of the air conditioner, provides a seal around all four sides."

The standard Minute Mounts are also equipped with 2-speed fan motors and thermostats and measure 12½ in. high, 25 wide, and 14½ deep. The 115-volt, 7½ amp., 10M-2 has a capacity of 7,000 B.t.u. and the 230-volt, 10M-3 develops 8,000 B.t.u., the company said. Installation is made with Fedders exclusive "Safety-Fast" mounting plates that require no bolts, hardware, or tools, it was pointed out.

The Four Seasons line includes the "Custom" and "Deluxe" units which get their heat from a combination of a heat pump and resistance elements.

"The Four Seasons models plus a selection of six straight heat pump models in 1, 1½, and 2-hp. capacities represent every possible method of heating and cooling with one air conditioner," Fedders said.

"Featured in the 115-volt straight cooling models is the 12SS-2, a 1-hp., 7½-amp. unit rated at 9,000 B.t.u. This is a modernized version with improved features of the 812SS which was highly rated and accepted in independent research studies. This high capacity air conditioner has a twin cylinder compressor, three rows of evaporator and four rows of condenser coils and a three-speed fan motor."

The 11S-2 and 11D-2 developing 7,000 and 8,300 B.t.u., respectively, have two-speed fan motors. The 16CS-2, a 1½-hp. unit requiring only 115 volts, has a B.t.u. rating of 12,000.

The 208-230-volt series, representing 16 models, offers a variety of capacities in 1, 1½, and 2-hp. sizes. The leader model is the 11D-3, a 9,400 B.t.u., 1-hp. unit with a two-speed fan motor.

The highest capacity window unit in the new Fedders line is the 22C-3 with 19,000 B.t.u. This air conditioner is a five-row evaporator and five-row condenser type and has a twin cylinder compressor and a three-speed fan motor.

The redesigned front used throughout the 1960 line features a new woven gold colored mesh that gives a fabric-like appearance. The trim and cabinet are in a Hawaiian Tan. The control panel is located behind a slide door in the upper right hand corner of the front and the Fedders Weather-Wheel provides 360° air control.

All models have zinc coated steel cabinets, double gasketing, and a washable permanent foam filter. All custom units have a voltage compensator to allow for varying voltage needs. Except for the 22C-3, all cabinets are either 16½ or 19½ in. deep.

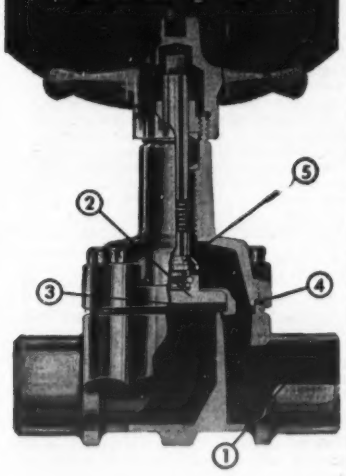
A new mounting system for the standard size units requires no drilling, measuring, or figuring, according to Fedders.

Giordano also described to distributors a 12-month program of planned merchandising activity.

Announcement of through-the-wall and central residential lines will be made shortly.

● FULL FLOW
✻ SELF ADJUSTING
● POSITIVE SHUT-OFF
✻ LEAK-LOK BONNET SEAL
● REPACKS IN USE
✻ TEMPERATURE PROOF

KEROTEST PACKED GLOBE VALVES



"Packed" with quality and of rugged brass construction, these valves are ideal for refrigeration and air conditioning systems, oxygen (degreased), nitrogen, compressed air and liquified petroleum gases. Features: 1. Designed for full flow. 2. Floating disc for self-adjustment. 3. Quick seating disc for ease of operation. 4. Leak-proof with exclusive gasketing. 5. Repacks under pressure with positive back seating. Maximum operating pressure 500 p.s.i.—maximum temperature 200° F. See your Kerotest wholesaler.

R12 Series ⅞"-2⅛" Forged Brass
R10 Series 2⅛"-4⅛" Cast Brass

KEROTEST

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Financially Responsible
Leading Manufacturer of
HEAT EXCHANGERS
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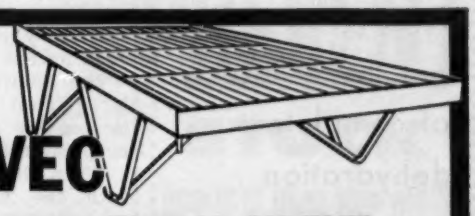
desires American License or Franchise for the production and sale of similar products in Germany. We offer an opportunity for investment in our present organization, and to interested parties our financial participation toward the establishment of an American subsidiary company to secure a firm foothold in the Common European Market can be considered.

Our years of experience in this industry assures complete cooperation toward the success of such an enterprise. We have expert engineers, skilled workers, a development staff and sales organization to open up the market immediately.

In reply—please give full particulars:

BOX A6222, AIR CONDITIONING, HEATING & REFRIGERATION NEWS



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• Low dew point at any temperature • Easy installation

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Dryomatic CORPORATION
ALEXANDRIA, VIRGINIA

Servicing Automobile Air Conditioners

(Vol. 4 — 1959 Models)

BY C. DALE MERICLE

PARKOMAT

Parkomat Mfg. Co., Inc.
2000 S. Akard St.
Dallas 15, Texas

FIG. 1—Added to 1959 Parkomat and Equip-aire line is trunk unit designed to be used either with under-dash unit in larger cars or alone in smaller foreign cars.

Marketed under both the "Parkomat" and "Equip-aire" names, this company's 1959 line consists of an under-dash unit and a trunk model (Fig. 1).

The trunk unit is designed to be used either as a "twin" with the under-dash unit (operating off the same compressor and condenser) in the larger 1959 cars with their increased glass area or as a single unit for smaller foreign cars.

The 1959 under-dash unit, except for some styling changes in the case, is the same as the 1958 model. An adjustable thermostat cycles a magnetic clutch and compressor to obtain temperature control, and pushbuttons provide for three-speed control of dual blowers.

Service instructions given in Vol. 3 on the 1958 Parkomat and Equip-aire under-dash units will apply equally well to the 1959 models.

The 1959 trunk unit (Fig. 1) is equipped with dual blowers located at each end of the evaporator case.

When the trunk unit is used with the under-dash unit, a separate three-speed blower control is provided on the dash for the trunk unit.

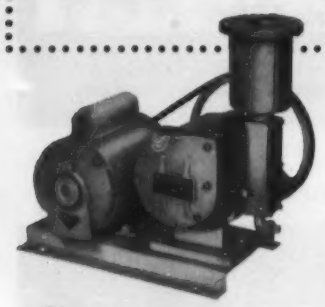
When the trunk unit is the only evaporator-blower assembly used, a control panel incorporating blower controls and thermostat for cycling the magnetic clutch and compressor is provided on the dash.

Refrigerant-12 is standard in the Parkomat and Equip-aire line. Full charge is 2 lbs. for the under-dash unit only, 3 lbs. for the trunk unit only, and approximately 5 lbs. for a combination under-dash and trunk system.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Now!
get the reliability
of complete
dehydration
with Stokes

Compound High Vacuum Pumps



Completely removing water vapors and other condensables before introducing refrigerants stops formation of corrosive acids that will cause operating trouble and damage to equipment. These new Stokes pumps were designed specifically to give you that extra protection. All this is accomplished at room temperatures; no heating, torching or bake-out. And look at their features! Rugged, reliable industrial construction, fast-pumping, lightweight, compact, portable, quiet . . . giving you *more performance per dollar than any comparable pump!* For full information, just print your name below and attach this ad to your letterhead.

(fill in name)

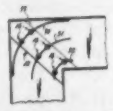
Vacuum Equipment Division
F. J. STOKES CORP.
5565 Tabor Road
Phila. 20, Pa.

STOKES

PATENTS

Week of May 5 (Concluded)

2,884,956. AIR GUIDE DEVICE. Fred Perlin, Oyster Bay, N. Y., assignor to Elgen Mfg. Corp., a corporation of N. Y.



1. In an air turning device, a pair of spaced apart parallel juxtaposed side plates and curved blades positioned at a right angle with respect to said side plates, said blades being single rectangular blades of different curvature and being fixedly secured to each of said side plates at a pair of laterally spaced points positioned at opposite side margins of said plates, said side plates having generally circular openings at each of said spaced points, a plurality of flanged cup-shaped members having a sidewardly extending flange and a cup-shaped portion depending from said flange. . . .

2,884,957. FLEXIBLE TUBING. Edward P. Harris and James R. Wall, Dayton, Ohio, assignors to General Motors Corp., Detroit, Mich.

1. A corrugated tubing comprising a number of tapes of substantially the same thickness in spirally wrapped overlapping relation wherein n is equal to at least three, the overlap of each tape upon itself being

$$\frac{1}{n}$$

and on the next adjacent tape being equal to

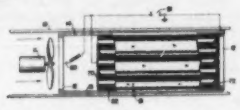
$$\frac{n-1}{n}$$

to provide a minimum wall thickness equal to n+1, said tapes being adhered together at their overlapping portions by an adhesive in coextensive relation with one another throughout their full extent, said tube being spirally corrugated to provide flexibility therein.

2,884,958. ROLLED TUBE. Leonard J. Asselin, Sr., Detroit, Mich.

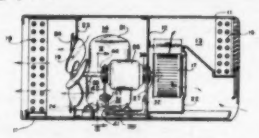
2. In a rolled tube, the body thereof including a pair of longitudinally extending tapered edges arranged in snugly overlapped engaging relation, there being similarly shaped elongated interlocked projections and recesses formed in said tapered edges, and an alloying braze securing and bonding said contacting surfaces, said projections and recesses extending continuously throughout the length of the tube body.

2,885,026. FLUID FILTER APPARATUS. Randolph E. Di Vette, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.



1. In an electrostatic air cleaning apparatus, a source of power, an ionization means and a collecting means, means for causing air to flow through said ionization means and then said collecting means, said ionization and collecting means comprising two rigid grounded plates each having a lower portion and an upper portion, a wire connected to a positive terminal of said source of power, means for supporting said wire between said upper portions so that particles of material contained in air passing between said upper portions and said wire are charged. . . .

2,885,142. AIR CONDITIONING APPARATUS. Arthur H. Eberhart, East Longmeadow, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



1. In air propulsion apparatus for circulating air through a pair of chambers, said chambers being separated by a partition structure having an opening therein, the combination of a motor positioned in one of said chambers and having a shaft extension at one end thereof extending through the opening in said partition structure. . . .

2,885,513. CONTROL DEVICE FOR REFRIGERATION APPARATUS. Edwin B. Judd, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York

1. A control device for refrigeration apparatus comprising first and second switches each having a pivoted operating lever in generally parallel spaced relation to one another, temperature sensing means, a first operating member actuated by said temperature sensing means and arranged transverse to and engaging one of said operating levers, a second operating

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Address orders to: Commissioner of Patents, Washington 25, D. C.

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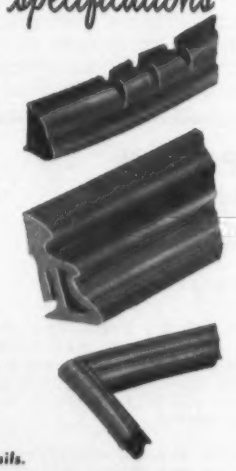
Special fabrication . . .
extrusions punched or notched for assembly . . . 90° and 180° splices for preformed seals.



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POSITIONS WANTED

MANUFACTURERS' REPRESENTATIVE—registered P. E. wants major product line in refrigeration - air conditioning for Michigan. Will consider Northern Indiana and Ohio. 20 years in executive positions with national corporations. Broad experience in sales, design, service and systems. Aggressive and cooperative representation assured. BOX A6341, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION TECHNICIAN, R & D—5 year bulk milk cooler industry. Experienced in testing, quality control, minor design, prototype development, service problems, production orientation, field testing, reporting and service management. Presently studying M.E. Age 27, married, 3 children. Willing to relocate. BOX A6342, Air Conditioning, Heating & Refrigeration News.

SERVICE MANAGER, over 20 years in the air conditioning and refrigeration installation and service business. Field service representative for major manufacturer for over 8 years. South or west location preferred. BOX A6343, Air Conditioning, Heating & Refrigeration News.

TRAINEE, YOUNG man, age 25 desires position installing and servicing commercial and industrial air conditioning and refrigeration equipment. Graduate of Lincoln Technical Institute. Has had six months in the field servicing commercial and domestic equipment and is now presently employed by Tenney Engineering. Wishes to start under the apprenticeship program. Desires work in the vicinity of Newark, New Jersey. BOX A6345, Air Conditioning, Heating & Refrigeration News.

JUNIOR SERVICE engineer or heat load estimator. Background principally theoretical. College and practical business experience adaptable to refrigeration and air conditioning. Desire permanent position offering future promotions with an established commercial or industrial equipment manufacturer. Locations in California, Pacific Northwest, Midwest or Denver, Colorado desired. BOX A6346, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

SALES ENGINEERS qualified in engineered machinery refrigeration and air conditioning sales, who want to work and who want incentive and a future commensurate with their efforts, contact Walter L. Pharo, Vice President and General Manager, CANADIAN ICE MACHINE COMPANY, 65 Villiers Street, Toronto, Canada, manufacturers and distributors of York products throughout Canada for over 47 years.

ENGINEER REFRIGERATION Controls—To head a department on design and development of commercial refrigeration control valves of all types; national corporation with midwestern manufacturing and engineering facility; salary and bonus commensurate with work background and ability. Send full details, qualifications and personal data to BOX A6172, Air Conditioning, Heating & Refrigeration News.

CABINET DESIGN & development engineer for commercial refrigeration manufacturer in Southeast. Experience with display cases desired. Please submit resume of qualifications and expected salary to BOX A6325, Air Conditioning, Heating & Refrigeration News. All replies held confidential.

AIR CONDITIONING engineer for design and development of package type heat pumps through 5 hp. wanted by West Coast manufacturer. Must be experienced in the design, development, and testing of residential air conditioners and capable of initiating and carrying a design to completion. State age, past experience, education and salary requirements. Our engineers know of this ad. Reply to BOX A6344, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION ENGINEER wanted who is capable of designing small refrigeration systems for household refrigerators and freezers and commercial cabinets. We purchase compressors but the man we choose must be familiar with design of high-side assemblies and sizing of evaporators and fans for plated or finned coil type. Should have experience with automatic defrost methods. The man who demonstrates ability can look forward to assuming chief engineers post in future. Applicants should give complete resume of education, experience, and salary requirements. Reply to BOX A6347, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

AJAX ICE Machine parts—We have purchased the inventory of parts, plus all tooling, for the Ajax Electric Iceman, formerly manufactured by Servel, Inc. We are now furnishing replacement parts, for all models including Ajax Pebble Machine. Catalog & prices available. AJAX EQUIPMENT CO., INC., 73 Pine Street, Montclair, N. J.

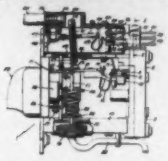
BUSINESS OPPORTUNITIES

FOR SALE—Refrigeration & air conditioning business. Commercial and industrial. Established for twelve years in Southern California. All stock & equipment including truck. BOX A6334, Air Conditioning, Heating & Refrigeration News.

MISCELLANEOUS

ATTENTION REFRIGERATION Servicemen: Would you be interested in saving from 25 to 50% on many standard refrigeration and air conditioning parts and supplies? Send for our free circulars and catalogs. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

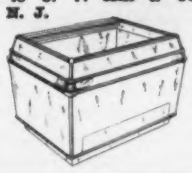
member having one end aligned for engagement with one end of said first operating member and arranged trans-



verse to and engaging the other of said operating levers, and means for adjusting the position of said one end of said second operating member relative to said one end of said first operating member.

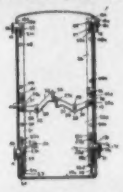
DESIGN

185,108. REFRIGERATED CASE. Donald A. Voorhies, Morrisville, Pa., assignor to C. V. Hill & Co., Inc., Trenton, N. J.



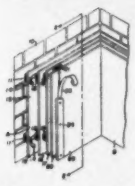
Week of May 12

2,885,723. RIGHT AND LEFT OPENING REFRIGERATOR DOOR. Leon Altmann, New York, N. Y.



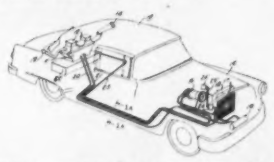
4. The combination with a body forming a compartment and having opposed side walls disposed vertically, a pair of hinge members fixed to one side wall and disposed in vertical alignment with each other, a pair of hinge members fixed to the other side wall and disposed in vertical alignment with each other, a door constructed to close the opening between said side walls, a vertical bar mounted to slide on one side edge portion of the door and provided with hinge members disposed in vertical alignment with each other and adapted to have simultaneous hinge coupling action with the hinge members first-named herein. . . .

2,885,743. INSULATING STRUCTURES FOR REFRIGERATED SPACES. James G. Macormack, Mount Kisco, N. Y., assignor to Alumiseal Corp., New York, N. Y.



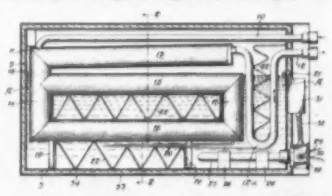
1. A refrigeration enclosure for use for extreme internal conditions of temperature and humidity relative to the outside, comprising an outer wall exposed to the warm side, an inner wall exposed to the cold side, said walls being spaced apart from each other a predetermined amount to establish an air space therebetween, a plurality of intermediate walls within said air space. . . .

2,885,865. METHOD AND APPARATUS FOR REDUCING VAPOR LOCK TENDENCIES OF AIR CONDITIONED AUTOMOBILES. James R. Muenger and Herman I. Wilson, Beacon, N. Y., assignors to The Texas Co., New York, N. Y.



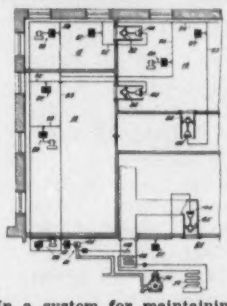
6. The method for improving the fuel volatility tolerance of an automotive vehicle comprising flowing a refrigerant between the compressor and evaporator assemblies of a closed cycle air conditioning system used in said automotive vehicle, and passing the fuel provided the engine of said vehicle in heat exchange relationship with said refrigerant flowing between said assemblies for cooling by said refrigerant returning from the evaporator assembly of said air conditioning system.

2,885,866. HEAT EXCHANGE ASSEMBLY AND CONTROL. Herman W. Kleist, Hollywood, and John E. Hutchinson, Arlington Heights, Ill., assignors to Dole Refrigerating Co., Chicago, Ill.



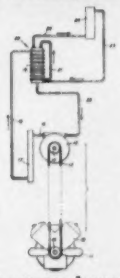
1. An automatically controlled heat exchanger for evaporating unvaporized refrigerant in a heat exchange cycle including a narrow chamber formed by top, bottom, and side walls hermetically sealed at their junctions to thereby form a chamber substantially longer than it is wide and substantially wider than it is thick, an insulating shell formed by top, bottom, and side walls, surrounding the chamber to thereby insulate the interior of the chamber from the temperature variations of the ambient atmosphere, one shell wall being cut away to thereby expose a small area of the chamber wall. . . .

2,885,867. AIR CONDITIONING SYSTEM AND CONTROL. Alden I. McFarlan, Westfield, N. J.



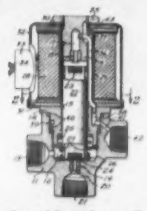
1. In a system for maintaining predetermined temperature and humidity conditions in a plurality of zones each of which may be subjected to varying sensible heat and vapor condensing loads, the combination of, an air cooling system which includes a compressor and cooling means forming a cooling zone, air moving means to cause a stream of air to flow through said cooling zone, air distribution means to carry the cooled air to the various zones and to discharge air at controlled rates into the various zones. . . .

2,885,868. AUTOMOTIVE AIR CONDITIONING SYSTEM WITH HEAT EXCHANGER. Richard J. Radcliffe, Wichita, Kan., assignor to The O. A. Sutton Corp., Wichita, Kan.



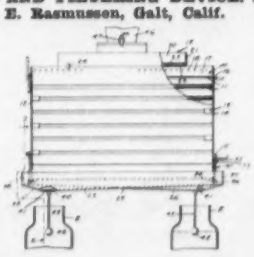
1. A compressor-condenser-evaporator refrigerating system particularly suitable for air conditioning automotive equipment wherein the compressor operates at a variable speed, the condenser is subject to variable ambient temperature and the evaporator is subjected to a variable load, comprising an accumulator consisting of a thermally conductive shell, a receiver receiving condensed refrigerant from said condenser and comprising a receiver coil wrapped closely about said shell, a capillary restrictor coiled within said accumulator, an evaporator inlet tube leading from said accumulator to the evaporator, one end of said capillary restrictor receiving refrigerant. . . .

2,886,063. VALVE STRUCTURE. William A. Ray, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif.



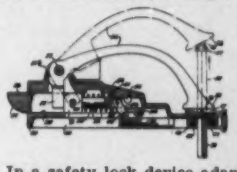
4. In a solenoid valve of the three-way type: a valve casing having a chamber therein; a solenoid operator at the outside of said casing and comprising an elongated plunger-tube sealingly mounted at one of its ends in an opening through a wall of said chamber; a solenoid plunger-member, inside said tube, movable in directions inward and outward of the casing and biased in one of said directions; an annular solenoid coil removably mounted around said tube at the outside of the casing and adapted, when energized, to move said plunger member in the other of said directions. . . .

2,886,071. COMBINED MILK COOLING AND FILTERING DEVICE. Rasmus E. Rasmussen, Galt, Calif.



In a cascade cooling system, the combination of a pair of receptacles adapted to hold milk, a frame comprised of side walls, a plurality of horizontal cooling tubes extending between said side walls, means communicating said tubes for the circulation of fluid therethrough, said frame being disposed above said receptacles, a pair of oppositely inclined troughs, a web extension between said troughs, means pivotally mounting said web on the lower end of said frame. . . .

2,886,363. SAFETY DOOR LOCK. Arthur E. Blumenthal, Chicago, Ill.



5. In a safety lock device adapted for use with the closure doors of a refrigerator structure, or the like, a casing adapted to be mounted on the outer side of such a door and being equipped with a bolt shiftable between extended and retracted positions, an outer handle connected with said bolt for retracting the same, an inner handle extending through said casing in alignment with a portion of said outer handle for engagement therewith to push the same outwardly to retract said bolt. . . .

(To Be Continued)

1 No appliance is better than its motor

2 No motor is better than its safety protection

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When? Is Only Question on Excise Tax--

(Concluded from Page 1, Col. 3)

One remaining big question is *when* the new regulation will take effect. Some Internal Revenue Service officials are said to have expressed the belief that it cannot become effective before Dec. 1 if usual procedures are followed.

Some industry observers think it could be as far away as Jan. 1,1960. There is some legal opinion to the effect that without any requests for hearings, it could be as early as Nov. 1.

The final, official regulation must be published in the *Federal Register*, and under normal procedures, such a regulation cannot become effective "before the first day of the first calendar month which begins more than 30 days after publication in the *Register*."

The new regulation will clearly apply the 10% tax on all room air conditioners, where formerly it applied to only those of under 1 hp. rating. The remaining big question in interpretation is whether the IRS might by design or inadvertently apply the tax to central residential systems and packaged commercial units. This, the industry contends, is not the intent of the law which Congress passed.

However, the Air-Conditioning & Refrigeration Institute (ARI) whose members are primarily concerned with such an interpretation, will apparently be satisfied with informal assurances from the IRS that the regulation will not be applied in any such manner, and will not ask for a hearing, thus allowing an early effective date.

Both the Room Air Conditioner Section and the Household Refrigerator and Freezer sections of National Electrical Manufacturers Association (NEMA) have a concern with the provisions of the Regulation, but apparently all sections are satisfied, and will ask for no interpretation.

The Commercial Refrigerator Manufacturers Association, whose members could possibly be effected by an interpretation of what constitutes a "household type" freezer, has expressed itself as feeling that the new wording will be an improvement over the old one, which set an arbitrary limit of models of 25 cu. ft. and over as being commercial freezers.

"The new language should permit us to prove, by design and application, that any frozen food cabinet designed for commercial use, regardless of size, should be exmept from the tax," said a CRMA official.

Texas Air Conditioner Tax Seen Needing Interpretation

WASHINGTON, D. C. — The recently-enacted Texas 3% tax levy on the "retail price of air conditioners," will take considerable interpretation.

That was the opinion of three members of the Tax Committee of ARI who, with George S. Jones, Jr., managing director of ARI, recently met with Texas state tax officials. They were cordially received, said the ARI group, but the state officials admitted that they were baffled as to just what types and sizes of equipment are to be included.

If the tax is to embrace more than room air conditioners, how is a "retail price" of an assembled installation to be determined?

It is possible that a "friendly lawsuit" may be instituted by some manufacturer in order that a definitive interpretation of the law may be obtained.

The ARI delegation was headed by Sydney Anderson, Jr. of Airtemp Div., Chrysler Corp., and included O. F. Otten, York Div., Borg-Warner Corp.; and James E. Dunn, Carrier Corp.

Baton Rouge Firm Forms

BATON ROUGE, La.—Polk's Heating & Air Conditioning, Inc., has been organized here. Offices are at 4835 North St.

Dairy Industry Meetings Set for Oct. 4-10

WASHINGTON, D. C.—Dairy industry members and guests will gather in Miami Beach, Fla. Oct. 4-10 for the conventions of International Association of Ice Cream Manufacturers, Milk Industry Foundation, and Dairy Industries Supply Association.

Association officials and convention experts expect upwards of 3,000 industry people.

Pennsylvania Bill--

(Concluded from Page 1, Col. 5)

licensed plumbers from its provisions. It was introduced by James A. O'Donnel, Bethlehem plumbing and heating contractor and co-sponsored by James P. O'Donnell, Philadelphia plumber.

Some opposition from heating and air conditioning dealer-contractors is anticipated.

Conditioning Cited As Electric Power Use Hits All-Time Record

NEW YORK CITY—Increased use of air conditioning equipment because of unusually hot weather was credited with setting a new record for electricity output during the week ending Aug. 29.

The 14,109 million kwh. output was some 100 million kwh. higher than the record set in the previous week and 15% higher than the same week last year, according to the Edison Electric Institute.

York Names Dealer

HUNTSVILLE, Ala.—Diseker Air Conditioning & Heating Corp. has been appointed York dealer.

Cecil Osborn is manager of the Huntsville office.

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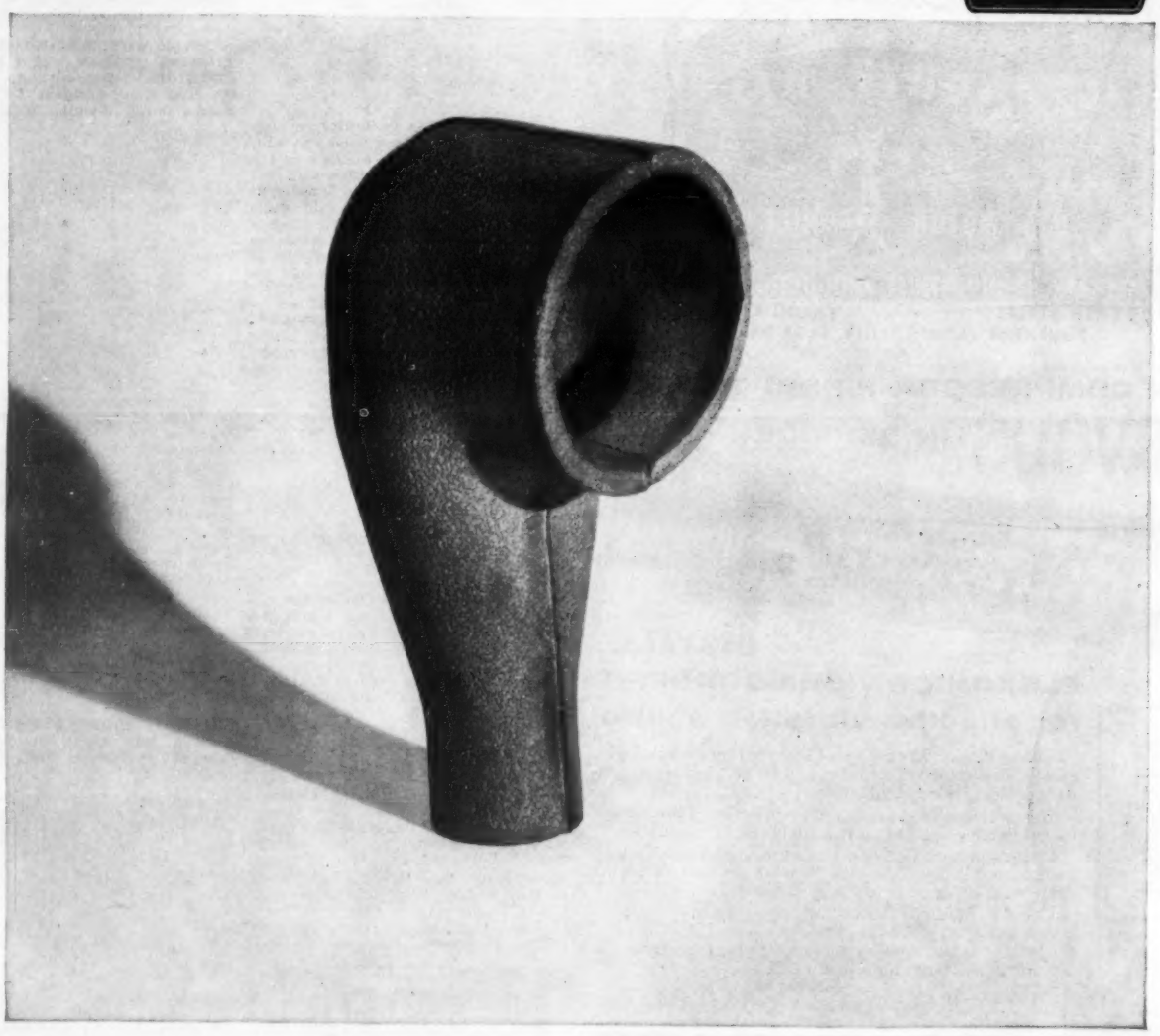

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